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CONTRIBUTORS

DOUGLAS C. RIDGLEY
J. RUSSELL SMITH
EARL B. SHAW
CARL LOUIS STOTZ
EUNICE R. BLACKBURN
OTIS W. FREEMAN
CLARA EGLI LE GEAR
TREVOR LLOYD
RUBEN L. PARSON
ROBERT M. BROWN
ELIZABETH E. GREGORY
WILLIAM J. BERRY
E. RAY CASTO
ROYAL B. EMBREE, JR.
CLAUDE EGGERTSEN

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GEOGRAPHY NUMBER

DOUGLAS C. RIDGLEY, Editor

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EDUCATION

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FOREWORD

DOUGLAS C. RIDGLEY
CLARK UNIVERSITY

THIS is the fourth Geography Number published by EDUCATION. The previous numbers appeared in January, 1932, January, 1935, and January, 1938.

The contributors to this number present various phases of geography as related to education, to travel, to home life, to maps, and to regional studies.

Dr. Smith, out of his rich experience as world-student, teacher, and writer, explains how modern geography contributes basic information necessary for an understanding of the peoples of the world wherever they may live.

Dr. Shaw, as a teacher-traveler, outlines procedures that enable teachers, students, and tourists to increase the educational benefit of their journeys at home and abroad.

Dr. Stotz, for five years a teacher of geography in Robert College, Istanbul, Turkey, and during that period an extensive traveler in the Near East, presents an interpretation of the political problems of the countries of the Near East. Dr. Stotz prepared this article in September, 1939, only a few days after war broke out in Europe.

Miss Blackburn is principal of the American School in Merida, Yucatan. She writes from personal observation of the home life of the Mayan Indians of Yucatan.

Dr. Freeman offers a geographic interpretation of the "Inland Empire," a region that he knows from long residence and from extensive field studies, a region finding increasing notice in news reports, yet, without boundaries on any map, a region occupying portions of four states of the United States and one province in Canada.

Mrs. Le Gear gives a vivid account of the growth of a map collection from small proportions to one of the great map collections of the world. The visitor to the National Capital should plan to spend a few hours in the Division of Maps in the Library of Congress.

Mr. Lloyd has enjoyed a wide teaching experience in his native land, England, and in Canada. His personal acquaintance with the British schools as student and teacher, together with his recent studies in the United States, enable him to speak to American readers on the subject of the British system of education in geography.

Professor Parson has served for several years as geographer in the Tennessee Valley Authority and for

several years on the Land Planning Board of the State of Mississippi. He still retains official connection with the Mississippi Land Planning Board. He has had ample opportunity to apply geographic understanding to the large national and state problems of Conservation.

Professor Brown presents a geography program in a teachers college, based on his valuable experience in the Rhode Island College of Education, where he is now Acting President.

Miss Gregory makes an objective study of the offerings of geography in the normal schools and teachers colleges of the six New England States.

Dr. Berry, as chairman of the geography department in a teachers college, discusses various problems that confront geography teachers in all teacher-training institutions.

Dr. Casto, a traveler in the Holy Land, tells how a knowledge of the geography and the customs of Palestine helps the student to visualize the Bible narratives more clearly and more accurately.

NOTE.—The articles by Mr. Lloyd, Professor Brown, and Miss Gregory, were presented at the New England Geography Conference held at Clark University in May, 1939.

GEOGRAPHY, A GROUP OF PEOPLE IN A PLACE

J. Russell Smith
COLUMBIA UNIVERSITY

THE current attempt to fuse geography, history, and civics into social studies will do one of two things to the place of geography in elementary education in this country:

(a) It will decrease the importance of geography, or

(b) It will increase its importance.

An Early Concept of Geography

In some schools the entrance of the social studies concept has resulted in less geography, and that not so well done as it might be.

Why did this happen? Perhaps those school administrators who have all but shelved geography in the social studies process were unconsciously avenging some youthful tortures or waste of time that they endured under the name of geography.

Perhaps they memorized rhymes that contained lists of the capitals of states and countries or the boundaries of states; or perhaps they memorized long lists of the products, mountains, and rivers that belonged to certain countries. If such be true, and they think that geography is still like that, they conclude, not unnaturally, that geography is somewhat like Eeny, Meeny, Manny, Moe—of small value, and out it goes. Such lists of things almost or wholly unrelated to people are neither inspiring nor useful material for the modern school room. We wonder that the practice endured so long to torture and perplex youth. We wonder that it existed at all.

Perhaps we have here the explanation of the following episode, which is somewhat typical of many.

The principal of a large city high school became converted, and transferred geography from the natural science department to the social science department. This happened to transfer the classes from a well-trained specialist in geography to a person who had had no training at all in that subject and did not want to teach it.

Why was the geography of the past so often mere strings of facts, often useless facts, sometimes indeed almost senseless facts? Well, there is a logical basis for that too.

This old geography of unexplained facts is a natural product of the European concept that geography is the *distribution* of things. That concept quite naturally leads one to making lists, and almost anything may be listed, if the guiding element in the definition of geography is *distribution* rather than some measure of *philosophic, scientific, or economic importance.*

Geography as written by the distributionists tends to be like a murky liquid, so clouded with a multitude of small particles that you cannot see through it. You may have seen a chemist take a beaker of cloudy liquid, drop into it some crystallizing substance, and behold! crystals formed and fell to the bottom. There remained a clear liquid and a visible

and usable residue of crystals.

A New Concept of Geography

In 1904, something very important to the science of geography happened. William Morris Davis, of Harvard, dropped a crystallizer into the murk of distribution geography. That crystallizer was the relationship concept. Davis said in essence that geography is a study of the *relationships between the earth and the life upon the earth.*

When geography became a study of the relationship between the earth and man it started a quick transformation. Almost immediately geography began an astonishingly rapid spread through that part of American college education which deals with economics in the concrete form. A dozen years after the Davis pronouncement, Professor Fetter, of Princeton, then one of the deans of American economists, said, "I want my students to have economic geography before I try to teach them economic theory."

Within twenty years after Davis gave his definition to the world, every one of that large and rapidly-growing number of American collegiate schools of commerce, business or business administration (with one possible exception) had one or more courses of economic geography as a prescribed part of its curriculum. In commercial courses, in college and in high school, alike, economic geography is regarded as a basic subject.

Geography is equally indispensable to the understanding of history, of civics, and of sociology, and but little less so to an understanding of literature and even music. But enlightenment has gone more slowly in those parts of collegiate education. For example, some years ago I secured from ten leading universities the names of fifty recent doctors of philosophy in history. By questionnaire I discovered that not one of the number had had any geography whatever in college or graduate school. However, one of them had of his own volition read one book of a geographic nature. I hope he was not made to suffer for this daring heresy.

Much so-called historical writing must be, in a sense, like a play without a stage — dramatic episodes occurring in the air, so to speak.

In the theater, before the play comes on, the stage is set and the scene is often briefly described. In the *theatre* the play is made first and then the stage is made to fit the play. The play becomes the *environment* to which the *stage* is adjusted. But on the earth, where men do real things, the stage is made first. The earth is the stage, and if the play is a success it must fit itself to the stage (the environment.) Would you understand the play — the great play of man's affairs? Then understand the stage, the environment, especially those phases of the environment that do mould and shape men's actions.

Man Cooperates With Nature

Doubtless every reader of this article has seen statements to the effect that man has "conquered Nature." Someone makes this exclamation after contemplating a new scientific discovery or mechanical invention.

Few things are more erroneous than the assertion that we have conquered Nature. We have merely discovered some of her laws and found new ways to obey them.

To check up on this point as to whether man has conquered Nature or obeyed her, get a good world map of population density and ponder it. In northern North America we find a half million square miles of thick and shining ice, the Greenland Ice Cap. No man or beast inhabits this half million square miles of the earth's surface.

A certain temperature causes the land to be covered with ice. At a slightly lower temperature on the coast of Greenland and across northern North America, tundra replaces ice cap and almost encircles the globe in arctic latitudes. In summer, the tundra is sticky with mud, splashy with pools of water, buzzing with billions of mosquitoes, noisy with the cries of water fowl. In some places the tundra is covered with its great crop of moss; in other places green with grass, or red, yellow, white, or blue with acres of flowers. The occasional passage of caribou or reindeer further enriches the resources of tundra in summer. Nevertheless, tundra is the home of a very scanty population of Eskimos and reindeer peoples.

Southward from the tundra the temperature is a little warmer. Vegetation responds to this difference — trees, a zone of trees, the largest forest in the world. This is the Great Northern Forest of North America, the Taiga of northern Europe and Asia, with its sparse peopling of fur hunters, gold seekers, and other gleaners.

Add a little heat by going south and we come to the rye, oats, and potato belts of Canada, Scandinavia, Poland, and Russia. This increase of temperature permits crops, farms, villages, towns, cities. Its influence upon density of population is profound. There are millions of men, modern nations, complex cultures.

Continue on our minds the advance towards the Equator and we contemplate the spring wheat belt, then the corn belt, the cotton belt, and, beyond the land of frost, the tropic lands with their endless heat.

It rains. How much? The answer to this question decides whether the land is to be swampy and covered with a dripping forest or whether it is to be the alkali flat of a desert.

At what season does it rain? If rain falls at all seasons moderately or abundantly there is forest. If rainfall is confined to one season there is a grassland. If it is a good grassland, the region may become a great wheat producing region like Kansas and parts of Russia. If it is poor grassland, the region is fit only for scanty pasturage and becomes the home of the Nomad. This occurs where there is nothing for man to live on but flocks, nothing for flocks but small wild grass, and of this not enough to support flocks in one locality for any long period of time. Therefore the flocks must move. Man must move with his animals. Around this one fact of pastoral nomadism man has built a clear-cut culture in which nomadism and its accompanying mobility stand out with striking clearness and dominate almost every phase of economic action, social organization, law, custom, and even religion.

Does rainfall occur in winter, as on some continental margins? Then

we may have the climate of California.

Does it rain in summer, as in many continental interiors? Then we may have Nebraska, Saskatchewan, or Peiping. The *average* of figures for rainfall may be extremely favorable, but is this rainfall dependable as to time of occurrence? For example, the figures that show the so-called *average* rainfall of parts of the interior of Brazil are impressive and indicate a region good for agriculture. But the land is almost uninhabited because of desolating droughts due to *irregularity* of rainfall.

These brief allusions to the way temperature and rainfall play football with mankind show that man has *not* conquered Nature. He is merely getting acquainted with Nature so that he may utilize her in certain situations and keep out of her way in other situations.

If space permitted, we could show how men in a given place may be few or many or none at all according to the character of the surface or soil, or the accessibility of the location, or because of other environmental factors.

Increasing Importance of Geography in Primary Education

When one conceives that geography is *relationship,* he has started an educational revolution. The social studies concept is one of the results of this particular revolution. The idea is very important, but putting it into operation raises profound difficulties. Can geography, history, and civics be taught at one time as one subject? Whatever may be the answer to this question we must ever remember that social study starts with geographic understandings. Geography is the base and it must be well taught. That is no easy matter. Geography alone is a difficult subject to present, and adding other subjects to it does not simplify the process. The social studies concept in elementary education seems to call for more and better teaching of geography than we have ever had.

I have just given brief intimation of the complexity of the geographical environment in which man lives. It is the geographer's task to examine that mass of environmental fact, find what the environment has helped man to do, what it has permitted him to do, what it has prevented him from doing; then, in view of the facts, to make a concrete, lucid, and usable statement of the relationships which evolve from the concrete and established facts of earth.

How shall this be done?

A few years ago I met Dr. Isaiah Bowman, now President of Johns Hopkins University, then Director of the American Geographical Society of New York. I chided him because he was looking jaded. Quickly he answered, "I have just finished a book." (It was the second edition of *The New World,* that precious American political geography.)

"Do you know, Smith," he continued, "a geography is the hardest of all books to write?"

I had never thought of it, although I had endured many a headache in the attempt to present geography.

"You notice," continued Bowman, "the geographer* is nearly always

* Since this was a conversation, I cannot claim that every word is as Dr. Bowman uttered it, but there is no doubt about the philosophy, with which I heartily concur.

dealing with *a group of people in a place.* Before he can proceed, the audience must know about the place — soil, surface, temperature, wind direction, rainfall, minerals, commercial location — the whole long string of factors. The audience needs to have the facts about the complete geographic environment, and if the geographer begins by giving all these environmental facts one after the other he becomes an encyclopedia, and his audience is plainly bored. To make a usable story he must select, omit, explain, lay emphasis. It is difficult to present a usable, authentic story that includes the essential facts without wearying the hearer."

In my opinion this explanation by Dr. Bowman gives perfect support to the claim of Professor Leighly of California when he said that while geography is a science, to write geography is an *art.* He might have pointed out that the blending of different colored pigments to make other colors is a science, but to make a picture with them has for centuries been an art.

Dr. Bowman's idea shows why it is much more difficult to write about *geography* as defined by Davis than it is to write about the *elements* of geography. Wind and rain, soil and surface, are simple in comparison to explaining the complex of earth facts that exists in any place and showing its *relation to life in that place.*

Some recent books have given proof of Dr. Bowman's point. They present the *elements* splendidly but leave to the reader the task of making from these elements a synthesis that gives a working knowledge of the *human situation* in any given part of the earth. The major task of teaching geography is *to present the result of synthesis of knowledge of the elements. It is not really usable until it has been hammered out into a knowledge of regions presented in such a way as to be a guide to men's actions.*

A Group of People in a Place

Every group of people lives in a region. What can they do with it? Before answering this question they must *understand it as a region.* From the human use standpoint they need the *result* of a complex of elements — properly weighed and appraised as Bowman indicated.

All people (and all peoples) must live their lives on this earth. It seems self evident that we can live, make our living and conduct our society more efficiently if we have extensive and thorough knowledge of the earth and of the opportunities and limitations that it presents to man. Is argument needed to convince educators of this imperative need?

Also it would seem that there must be agreement that occupation and livelihood of individuals, of groups and of nations, are influenced definitely and in manifold ways by the geographic environment in which they live. This is the material basis of human society. Upon this base we build. We build by trying to solve economic problems, social problems, and personal problems. Legislation and social organization are adjustments to the industrial and geographic base.

As an illustration, consider the question of water supply as the problem presents itself to California.

Half of the state is tied together in one unit by the dependence of county after county on the huge central valley water control enterprise, with its reservoirs, diversion dams, canals, power plants, power lines, pumping plants and far-reaching plans for managing all these things.

Much more far reaching than this is the interstate enterprise that supplies water to Los Angeles and southern California. Before a single gallon could be lifted from the Colorado River by power from Boulder Dam six states and the United States government had to coöperate by means of complicated negotiations. Years had to be spent in surveys and investigations and scores of millions of dollars had to be spent on Cyclopean engineering works.

Most of our state planning commissions have laid down details for some far-reaching improvement in the adjustment of the lives of the people to the geographic resources of the state. In nearly all cases they can come to pass only as a result of social education, legislation, and honest administration.

Culture and Geography

And finally, the higher aspects of culture are a kind of capstone to the social, industrial pyramid with its geographic base. Therefore, to understand economics, history, civics, art, literature, and sometimes even music we need a basis of knowledge concerning the facts of geography. I may add that the best teaching will be that in which the step-by-step relationships are kept constantly in the mind of the student. Unless the facts are in order, the truth is not told. When geography is well taught we have an evolutionary process somewhat as follows: At the basis geographic facts, from the facts ideas, from the ideas objectives, from the objectives conduct, from conduct legislation, convention, literature, art, and new ideas of right and wrong.

An era of human migration seems to be drawing to its close. Now instead of man migrating to find food, we find food and other commodities migrating to find the men who will pay for them. Therefore, today, more than ever before, the understanding of a group of people in a place requires an understanding of a large part of the world.

It was not an accident that geography boomed in American education in the first third of this century. But the attempt to teach social studies without a geographic base — that was an accident.

EDUCATIONAL VALUES IN TRAVEL

EARL B. SHAW
STATE TEACHERS COLLEGE
WORCESTER, MASSACHUSETTS

TRAVEL, whether in our own country or in foreign lands, has definite educational value. For the teacher, a journey to new lands provides the opportunity for enrichment of professional background. For the geography teacher, travel is of especial value because geography is a science based primarily upon an understanding of both physical and man-made landscapes. The geography teacher observes the land forms, soils, climates, vegetation, and the people that make up the land patterns. He obtains a new point of view, a freshness of approach, an assurance of subject matter, and, best of all, a geographic understanding of peoples and their problems, which, if imparted to students, works significantly towards international good will.

If travel is to serve the purpose of professional enrichment for the teacher, however, there are a few important principles that must be kept in mind. The geographer, like the average tourist, can easily miss his objective if he fails to heed certain simple procedures by which the more thoughtful traveler is guided. These procedures, which the writer endeavored to follow on the World's Federated Education Association Cruise to South America in 1939, provide the theme for this study.

Preparatory Reading

If one expects to profit from travel, perhaps the first point to emphasize is the acquisition, through reading, of some knowledge of the territory to be visited. A brief period of library research adds greatly to the enjoyment of any travel trip. Knowing what to look for and anticipating new experiences enhance both the pleasure and the educational value of the journey. Without such preliminary study, worthwhile opportunities often pass unheeded. While traveling along the coast of southern Brazil, standing at the rail of the ship as it neared the shores of Santa Catherina province, a fellow passenger inquired of the writer whether the escarpment rising rather abruptly from the sea was a part of the Andes Mountain System. One glance at any travel literature would have answered his question in the negative, while a somewhat more careful study of South American physiography would have given the questioner so accurate a conception of South American land forms as to make his direct observation of greater educational value.

A casual examination of the climatic literature on Brazil, Uruguay, Venezuela, Argentina, and the islands of the West Indies, would enable any traveler to better understand the various climatic types to be experienced between New York and Buenos Aires. To the uninitiated, however, changes from hot weather to cool weather frequently came as a surprise, and quite often were unwelcome because preparation had not been made for seasonable clothing. But those who had done some reading on the subject anticipated the changes and were impressed in an unforgettable way that climate is related to latitude, altitude,

mountain barriers, prevailing winds, and high and low pressure belts.

Ocean currents provided an excellent lesson in oceanography for those who, because of previous study, were prepared to appreciate it. It was interesting to note on the return trip, after passing Cape Sao Roque, that the *Rotterdam,* our cruise ship, was literally driven along by the North Branch of the South Equatorial Current—driven along so fast, in fact, that the arrival in Port of Spain, Trinidad, was more than a half-day ahead of schedule.

History often acquaints one with geographic items of information. Although Spanish is the official language of nearly all countries of Latin America, cruise members who were aware that Brazil was once the seat of the Portuguese Empire were not at all surprised to find Portuguese the official language of the country of Brazil which contains half the population of South America.

Numerous other examples could be cited to illustrate the advantage of examining, before visiting foreign shores, the literature on foreign lands and learning something about the topography, climate, ocean currents, and history, as well as other physical and cultural factors.

Re-examination of the literature after the journey serves to emphasize and clarify impressions gained in any travel trip. *Read, see, and read again* is rule number one for the traveler who hopes to gain the utmost value from his field work.

Use of Maps

The essence of a second basic principle observed in making travel an enriching experience also partakes of forehanded preparation. Maps express to the geographer what road signs show the automobile driver, and in most cases, maps express much more. If a thorough understanding of location and other features of the environment is desired, maps provide such information in graphic form. Pack into the traveler's bag a supply of maps for the region to be visited, and these will become a source of invaluable instruction in the field. Tracing the course of the journey, and entering on the map pertinent items as they are observed, constructs an excellent educational device—educational for the teacher and for all students who may later profit by it. Adherence to this procedure soon accumulates a valuable reference file of illustrated material, while the collector has gained first-hand knowledge of features which might otherwise easily be overlooked.

Such a plan proved a decided boon to the author in conducting classes on shipboard on the South American cruise the past summer. Charged with the responsibility of teaching two geography courses under conditions, interesting enough, but not ordinarily conducive to study, he supplied himself with many maps of the regions to be visited. Before reaching any port on the itinerary, the instructor displayed in class a map showing both harbor and city—a type of map which may be purchased for a moderate sum from the United States Hydrographic Office at Washington. This office can supply such maps for nearly every major port in Latin America. These maps show at a glance whether it is necessary to use a tender in landing, or whether passengers will disembark at the wharf; whether the city lies on the mainland,

like La Guaira; or on islands, like Santos; or on islands, peninsula, and mainland, like Pernambuco; whether a river offers access to the hinterland, as at Buenos Aires; or whether no river penetrates the immediate interior, as at Rio de Janeiro; whether mountains lie near the coast, as at Rio de Janeiro; or whether plains features dominate the topography as at Montevideo. Interestingly, this Uruguayan city received its name from a slight elevation, about 500 feet high, easily seen from the harbor and quite obviously represented on a map. In fact, Montevideo, a Spanish word, is derived from the two words, "monte" and "video" which, translated, mean "I see the mountain" — a statement not too far-fetched when viewing the elevation, because its altitude above sea level is in such striking contrast to the featureless plain stretching far away from it on all sides.

These items of information, and other items appearing on the map, were pointed out and discussed in class before visiting each city on the itinerary. After returning to the ship, a few minutes of the next class period were devoted to map work and to a review of previous points, so that all could obtain a true geographic orientation.

Along the Wharf

Getting off the beaten path of ordinary travel is a third procedure that yields good dividends to the traveler eager to increase his geographic background. An early morning walk along the wharf where freighters are loading and discharging cargo gives one a splendid idea, not only of the variety of exports and imports, but also of the countries with which trading is done. Strolling along the water front at Buenos Aires, the writer saw corn, wheat, beef, hides, and other agricultural commodities being loaded into the holds of waiting steamers. Coming out of these holds were coal, machinery, and other materials needed in the great farming country of Argentina. In Brazil, a long list of exports showed that while coffee is dominant in that country, a big assortment of other commodities are being moved to all parts of the world. Reading statistics about the commerce of foreign countries can never yield the impression one receives by actually seeing the shipping activities at the wharf.

Inland Journeys

Excursions into the hinterland are likely to convey a truer picture of native life than contacts with the coast line. A journey of a few miles into the interior of a region often enlarges one's conception of a country, its problems, and its people. Such excursions are not always easy to arrange and time is usually at a premium on an organized cruise; but with a plan in mind and a determination to make the most of every opportunity, many delightful and informative side trips may be included on most itineraries. The effort expended in such pursuits often brings definite advantage for the adventurer. A case in point is the independent sight-seeing done by the author on the cruise last summer. Very little time was allowed for inland trips, but by previously outlining clearly what he wished to see, he covered many extra miles. Leaving the boat at Santos, a train took him to Sao Paulo; from there another side trip by rail brought him to Campinas on the edge of the coffee country. Re-

turning to Sao Paulo for the night, he rode overland the next day to Rio while the *Rotterdam* sailed from Santos for Brazil's largest city. For twelve daylight hours of train travel, the geography of the Parahyba Valley unfolded before his eyes, revealing many features heretofore unknown or not clearly understood.

Another side trip, a drive to Juiz de Fora, 150 miles north of Rio, provided opportunity to see what is reported to be the first teacher-training institution in Brazil as well as much interesting country en route. Contrary to popular opinion, no real coffee country lies in the immediate vicinity of the city of Sao Paulo, and many of the cruise members failed to see any coffee under cultivation save the few coffee trees growing in the Sao Paulo Esplanada Hotel.

Photography

A fifth point in outlining ways and means of obtaining real educational experience from travel is the practice of picture taking en route. Photography is a fascinating hobby and provides the traveler with a permanent record and pleasant reminders of his observation. Pictures of geographic quality made into lantern slides offer a most effective teaching technique and give students a more realistic basis for international understanding. Lectures supplemented with well-chosen views are usually popular with students and achieve desired objectives by stimulating interest and fostering curiosity.

The Native Language

A knowledge of the language of a country to be visited and some ability to speak the language provide one of the best preparations for realizing the fullest understanding of that country. One of the great causes for misunderstanding between Latin Americans and people of the United States is the language barrier. The author regretted many times that he could only reply to Spanish and Portuguese speech with but few of their words and phrases aided by gestures. Educated people of Brazil, Argentina, Uruguay, Venezuela, and the islands of the West Indies speak English fluently. When English-speaking drivers were not available, many questions remained unanswered, which, if answered, would have revealed more completely the landscape and man's relation to it. To gain increased educational value from any foreign travel, learn to speak the language you will encounter. Equipped with this means of communication your visit will be enriched immeasurably.

Summary

The author has listed six important "musts" for obtaining the ultimate educational value from travel. To summarize: first, the careful examination of pertinent literature before and after visiting a country; second, frequent and wide use of well-selected maps; third, an examination of the imports and exports to be found along the wharves of any big port city; fourth, the penetration of a country well beyond its periphery; fifth, the making of pictures possessing real geographic quality; and finally, gaining some knowledge of the language of the countries to be visited before entering the country. Acting upon these rules will yield not only much more enjoyment for the traveler, but will lay a sound basis for international understanding.

GEOGRAPHICAL ASPECTS OF NEAR EASTERN POLITICAL PROBLEMS

CARL LOUIS STOTZ
UNIVERSITY OF PITTSBURGH

Lands of the Near East

THE war in western and central Europe has caused many persons to wonder if the conflagration would spread to other nations and if so which states would be involved. It is practically impossible to forecast the duration of the war except to say that in all probability it will be a long one. It is possible, however, to survey some of the areas of political unrest which might prove to be scenes of future battles.

The lands of the Near East, because they serve as a bridge between three continents, Europe, Asia, and Africa, have experienced throughout history great movements of peoples, and have earned a reputation for political unrest. These lands comprise the Balkan peninsula in Europe and the southwestern portion of Asia. Politically they are divided between Yugoslavia, Rumania, Bulgaria, Greece, Turkey, and Italy (in Albania) in Europe; while in Asia, Turkey, Iraq and Saudi Arabia are independent states, and Syria, Palestine, and the Trans-Jordan are mandated areas. These eleven political units that constitute the Near East comprise a combined area of more than 1,000,000 square miles, with a population of 75,000,000 inhabitants.

It should be remembered that these are all individual states with individual languages, currency, and customs. While each represents ethnographical complexity, there is a well-developed sense of national unity active in each.

The liquidation of the first and second Balkan Wars, and the World War brought about settlement of various claims on the part of Near Eastern nations. These settlements resulted in the removal of numerous political problems which had harassed the peoples for many years. However, not all of the problems were solved, and recent events have made some of those which remain, more acute.

Problems in Europe

There are present today, in Near Eastern lands, three types of political problems, two of which are almost entirely geographic. These involve: (1) access to the sea, (2) economic distress, and (3) ethnographic unrest. Those problems concerning access to the sea and economic troubles have such a strong geographical base as to warrant detailed consideration here.

It will be remembered that Greece occupies the southernmost portion of the Balkan lands. The state is composed of numerous peninsulas and islands, a complex maze of mountains and inter-mountain valleys. An extension of the state through western Thrace results in possession of the northern shore of the Aegean Sea. Here is the basis for one serious problem. To the north of Greece are Yugoslavia and Bulgaria, each desirous of obtaining a portion of Thrace and the port of Salonika.

Bulgaria's claims to the area are based upon a feeling that the national independence is endangered by the fact that the only access to the world's trade-lanes in the Mediterranean is through the Turkish-owned-and-fortified "Zone of the Straits" (the Bosporus, The Sea of Marmara, and the Dardanelles). The Bulgarians point out that Turkey could close the straits to Bulgarian shipping. The Bulgars also remember that at the end of the first Balkan War, when Greater Bulgaria had a brief existence, the country included western Thrace.

Yugoslavia is in a similar position now that Italy has taken Albania. The Adriatic has truly become an Italian sea in which Yugoslavian shipping could easily be stopped by the Italians. In addition, the Dalmatian mountains flank the coast throughout the length of Yugoslavia and offer only one easy access to the sea, the Pear Tree Pass in the far north.

The state is divided by a mountain range which makes transportation of products from the eastern portion to the sea very difficult. The possession of western Thrace with the port of Salonika would solve these problems for either Bulgaria or Yugoslavia. If war should spread to the Balkans there would be a rush upon Salonika by either the Bulgarians or the Yugoslavians as there was in the early days of the second Balkan war. Greece has realized this and has established a heavily fortified area on her northern frontier, controlling the passes through which such an attack on Salonika would come.

The desire for access to the sea has long been a major factor in the policy of Russia. That desire is keenly active today and brings about a complex problem in the Near East. The Republic of Turkey controls the entrance and exit of the Black Sea upon which Russia borders. Turkey in Asia and Russia have a common border of considerable length which is a prime mover in Turkey's desire to remain on friendly terms with Russia, Russia, on the other hand, desires friendship with Turkey to insure free use of the "Zone of the Straits."

Both countries have a geographic location which makes real friendship almost a necessity. Turkey with its strategic position and wealth of man power has lined up with the democratic western powers. Turkey's independence and integrity have been assured by Great Britain and France. But, Turkey's great neighbor has recently joined Germany, a fact which may mean that Turkey will eventually have to change sides.

Problems in Asia

In Asia, two areas of trouble represent danger spots for the future. Immediately south of Turkey is Syria, a large area mandated to France. Aleppo, in northern Syria, is the center of a very fertile and productive area, and is thus one of Syria's most important commercial centers. Products from this area pass through the Aleppo gap and are exported from Alexandretta on the Mediterranean Sea. The Sanjak (district) of Alexandretta has been virtually given to Turkey by France in exchange for military support, if and when needed. Italy has objected to the "gift" on the grounds that France does not have the right to give away any portion of a mandated area. That, of course, is a matter of international law and relations, but the geographical fact is that

without the port of Alexandretta, Aleppo is cut off from the sea and it is certain that the Syrian Arabs will make some effort to regain this strategic district.

Unrest has been rampant in Palestine for some time, and most of it is based upon ethnographical considerations and mis-government on the part of the British to whom the area is mandated. However, an important geographical consideration enters into the problem in Palestine. Because of their location, England regards both Palestine and the Trans-Jordan as defense buffers for the Suez canal. It is impossible to over-emphasize the importance of the canal to Great Britain. It will be recalled that in the World War Ottoman troops came almost to the banks of the canal. In the recent proposal for the division of Palestine, Britain proposed to hold a mandated area which was to include Jerusalem. This was taken by most neutral observers as an indication of the strategic value of the area. Civic and ethnographic unrest in the area prior to the World War resulted in the Arab Revolt, and conditions today are not unlike conditions twenty-five years ago, except this time the chances are that England will have to fight a revolt rather than inspire it.

The relatively simple matter of geographical location, the relationship between the distribution of land and water, is, as we have just seen, producing several danger spots in the Near East, any one or all of which may become centers of war operations.

Economic Problems

Of quite a different nature is the economic problem of Near Eastern countries, although it is based largely on such geographic factors as the distribution of mineral wealth and climate. The nations of the Near East are agricultural in economy. This is not a matter of choice but rather of geographical necessity, and it has led to economic distress throughout the region. Nature distributed the industrial resources of the earth in a very uneven fashion and was especially niggardly in bestowing such gifts in the Near East. None of the countries there possess the basic raw materials in sufficient quantity to support a modern industrial development on a large scale.

Agriculture is the major occupation of the people, most of whom are peasants. They work small plots generally in a rather primitive fashion. Antiquated methods of farming, when combined with climatic disadvantages, result in very small yields per unit of land. The Mediterranean climate which prevails in most of these areas is one of short, cool, wet winters and long, hot, dry summers. Thus plants receive moisture during the cold, unproductive period and almost none during the warm season.

Despite climatic disadvantages, agriculture is the principal source of national wealth and agricultural products are the chief items of export. These states based upon an agricultural economy find it necessary to import manufactured goods, but the export of agricultural products has become increasingly difficult. This has led to uneconomic attempts to establish industries in an effort to attain national self-sufficiency. It has led to economic distress for the overtaxed individuals and for the state governments, as well. Treaty and al-

liance overtures of any sort to Near Eastern countries, by great powers, must of necessity include some economic considerations, and nations offering to buy surplus agricultural products meet with the most favorable consideration.

Problem of Minorities

A third type of political problem is geographical in that it involves the location of the abodes of man. This type of problem concerns unrest on the part of various ethnographic minorities. The exchange of populations between Bulgaria, Greece, aand Turkey, and the break-down of the Ottoman Empire did much to solve many pressing ethnographical minority problems. However, today the conflict between Zionists and Arabs in Palestine is a serious problem which may at any time flare up into open war. Similarly, dissatisfaction on the part of the Syrian Arabs with the methods employed by the French government in withdrawing the mandate promises to lead to trouble. The process of withdrawing the mandate has been suspended for the duration of the present war, however.

In Europe, Bulgaria still lays claim to the Dobrudja, that fertile area between the great bend of the Danube river and the Black Sea in Rumania. The Bulgar claim is based on the fact that many Bulgars live in the area and desire to be governed by their own people. Now that the Croats in Yugoslavia have been pacified, temporarily at least, one problem seems solved; but another has reappeared. The Macedonian movement, once felt to be settled through the exchange of populations between Turkey and Greece, has again come to the fore. In Rumania, concern is felt for Bassarabia, the northeastern portion of the state, which was acquired from Russia at the end of the World War and which contains numerous Russians. Also, Rumania now possesses portions of the plains continguous with Hungary. The Hungarian demand is for all lands of a decided plains nature and this constitutes a threat to Rumania's western border, especially since the claim is based also upon the Hungarian character of the peoples now living in that portion of Rumania.

Summary

These then are the problems which represent vulnerable spots in the world's peace structure. The urge to reach the sea, and the unrest of various minority groups, are obviously the two most important types of problems, although the economic situation is not to be neglected by any means. None of these problems need lead to war. All can be solved by coöperation and negotiation, because, for the most part, they are based upon geographical factors which do not change even though countries disappear or re-appear. The factors of the geographical environment of any given location remain the same no matter what the area is called or who owns it. The problem in the final analysis is to adjust the political structure to the geographical setting.

PRIMITIVE METHODS IN USE IN YUCATAN

EUNICE R. BLACKBURN
PRINCIPAL, AMERICAN SCHOOL
MERIDA, YUCATAN, MEXICO

Introduction

MERIDA, the capital of Yucatan, is a modern city of 100,000 inhabitants. Merida was founded as a Spanish city in 1542 on the old Mayan site of the capital town of T'ho. In Merida, old buildings and old customs exist today alongside new and modern buildings, modern customs, and other evidences of the present-day Machine Age.

The Mayan Ruins of structures built between 200 A. D. and 500 A. D. are still found in many places throughout Yucatan. Not much is known of the home life of the people who built these stupendous temples. We know that these people raised corn, beans, and squash, much as the Mayan Indians do today; they made pottery, had houses similar to the huts of today, and lived in villages as do the inhabitants of the present. Some of the old Mayan roads, built 1,500 years ago, still serve for local transport and for automobiles.

This article presents some observations of the primitive industries that flourish today in Yucatan and still contribute to the daily needs of the native Mayan Indians of the peninsula.

The Land of Deer and Wild Turkey

In 1580, an early writer referred to Yucatan as "The Land of the Deer and Wild Turkey," and today, more than 350 years later, one can always find in the markets wild deer meat that has been roasted under the ground, and usually wild turkey meat prepared in the same way. The meat must be cooked before it is put on sale, because the temperature of the region ranges between 52° and 100° Fahrenheit throughout the year, and ice cannot be obtained for conserving meat except in the best equipped markets of the larger cities. Although many modern inventions have been introduced, Yucatan still remains, "The Land of the Deer and Wild Turkey."

Clothing and Laundry

The Mayan Indians are industrious and personally clean; they bathe daily. White cloth is commonly used for clothing. Washing appears to be underway whenever one happens to call at any home. The washing is done in a "tub" shaped much like a small flat-bottomed boat. It is hollowed out from a cedar log, and is usually about four feet long, two feet wide, and six inches deep, with a shelf on each end on which the washed clothes are placed before hanging them on the line.

The clothes line is a loosely twisted sisal hemp rope. The women take pride in their clean, white clothes. Ironing is done by one-pound or two-pound sad irons which are heated over a charcoal fire.

Corn, the Chief Crop

The Mayan Indians of Yucatan live in groups or villages. No matter what work a man may have, he usually has a "milpa" or corn field.

One piece of land serves two years, sometimes three years, for corn; then it is allowed to lie fallow for about ten years.

The land belongs to the village. When a man wants a new field, he asks the village council for permission to stake off a certain piece of ground that is lying fallow. When permission is granted, the man cuts the trees and brush and allows them to dry.

During April and early May, just before the rains begin, the brush is burned. The burning raises the temperature slightly for the entire region and the air is filled with smoke, giving the sun, in early morning and late afternoon, a peculiar color.

When the rains begin, corn, beans, and squash are planted in the burnt-over fields. Men go from the village to their milpas for their day's work, instead of dwelling on the land which they clear, plant, cultivate, and harvest. The corn planting equipment consists of: (1) a seed bag made of a hollowed gourd; (2) a pole with an iron tip for making a hole in the ground for the seed; (3) a water bottle made of a gourd with a small opening and a corn-cob stopper; (4) a lunch bag made of sisal fiber; (5) the ever-present machete, or long knife, used for cutting grass, or weeds, or brush.

Four different kinds of corn are planted, each with a different maturing period, ranging from two and one-half to five months. White corn is preferred because most of the crop is used for human food. Corn constitutes about sixty per cent of the diet of the villagers. In some hills of corn, black beans are planted with the corn, and in some hills, squash seeds are planted.

When ripe, the corn is carried to the home in the village in a large basket, fastened to the back with a band over the forehead and another over the chest. A good yield is about twenty bushels an acre. Unhusked ears are often stored in the yard in little cribs of woven branches, built a foot or more above the ground. The husked ears are placed in a bin in one end of the house. In the small villages, shelled corn is the most common medium of exchange.

Before the corn is ripe, but after the milk is set in the grain, ears are often gathered and roasted below the ground in the husks. This is eaten cold and is considered excellent food. A special tortilla, or corn bread, is also made of corn at this stage.

Division of Labor

As elsewhere in the world, there is a division of labor between men and women. Women rarely help in any field work. Men rarely enter the thatched shed used as a kitchen, except for food. The Indian men are good to their wives. If both have a burden to carry, the man's burden is always in proportion to his size and strength. The weight of the baby—usually there is one—is deducted from the woman's burden.

In some of the primitive industries, there is a division of labor that differs in the different villages. For instance, in most of the villages where pottery is produced, men make the pottery; however, in some villages, only the women make the pottery. In some villages, the women make hammocks; in other villages, only men make the hammocks. In making

hats, however, men and women work together.

Pottery

No fine pottery is made in Yucatan. The principal use of pottery is for vessels that can hold drinking water and keep it cool. Since few wells are found in a village, and the water is brought to the house only once or twice a day, vessels that can hold water and keep it cool are a household necessity. The low-grade material available for making pottery serves this purpose admirably, because some water filters through the sides of the jars, and thus the temperature of the jar of water is lowered by evaporation.

Most water jars are shaped with a very small base. Wooden frames are made to support these large jars above the floor in order to increase the evaporation surface.

Men go out to the "monte," or unused grown-over land, and find the different kinds of rocks and clays for making the pottery. These ingredients differ in the different villages where pottery is made, each village claiming that its mixture is far superior to that used elsewhere.

The desired mixture of rocks and clay is placed on a large, flat stone and ground to powder by rocking a large round stone back and forth over the material. A week's supply is ground to powder, mixed with water, thoroughly kneaded, and placed in the work shed.

The potter sits on a low stool. In front of him is a board of hardwood, often mahogany. On this board, he places an upright wooden cylinder four or five inches in diameter, and about six inches high. This wooden cylinder is the most primitive potter's wheel known. On the top of this cylinder the potter molds his jars, turning the cylinder with his feet as he shapes the jars with skillful hands, using no measure except the eye and hand.

At the end of the week, the potter should have enough new jars molded to fire his kiln. Each family that is engaged in pottery-making has its own kiln. The kiln is a small stone-and-clay structure about four feet high. Three sides are built solid, and the fourth side is left partially open for the door. Wood and sticks are brought in from the *monte*. Wood is placed on the bottom of the kiln. Then the large and small pieces of pottery are carefully placed in the kiln with the wood and sticks packed around them until the kiln is filled.

The door is covered with green leaves and a piece of sheet iron. The wood is set on fire. When the fire has burned out, and the pottery cools somewhat, the kiln is opened. The pieces of pottery, still hot, are removed from the kiln by the use of a long forked pole.

The pieces of pottery that are sent away to market are fitted into frames made of small poles tied together with vines. Men carry these frames on their backs to other villages or to a railway station.

Chocolate Pots

Chocolate is the most common hot drink for breakfast and supper in Yucatan. Chocolate beans are roasted, and with nuts, bread crumbs, and stick cinnamon, are ground very fine. The mixture is patted out round like pancakes. To make the drink, a piece of this chocolate cake is put into a wooden pot, and sugar and boiling water added. A stick with a carved base is whirled in the pot un-

til the chocolate is in suspension in the foaming water.

In every home, rich or poor, the wooden chocolate pot is an indispensable article. These pots are made of a very hard native wood. The piece of wood used for a chocolate pot is four to seven inches in diameter and twelve to fourteen inches long. From these pieces of wood, the chocolate pots are carved by the use of a crude, hand-made lathe and a few sharp chisels.

Huts

In building their huts, the Mayan Indians of Yucatan use the materials of the vicinity. The huts are usually oval in shape. The upright posts are tree trunks, three to five inches in diameter, set into the ground. To these are tied the other poles that form the framework. A certain vine that is pliable when freshly cut, but hardens as its dries, is used, and poles thus tied together will support a surprising weight.

The roof slopes in all directions to the sides of the house. The thatch is usually made of palm leaves, but in some regions, a coarse grass is used for thatch.

Two doors, opposite each other, are made in the flat sides of the oval. There are usually no windows, as the doors are open during the day. Sometimes the doors are made of small branches and poles, but usually the doors are made of boards. The boards and nails of the doors are the only materials of the house that are purchased.

Hats

Fine Panama hats, and also cheap hats, are made for local use. The men of Yucatan wear hats similar in shape to the hats worn in the United States. For making the Panama hats, a special palm is used. The leaves are cut while they are still yellow and before they open out. The leaves are dried and bleached and slit into threads with a pin. The more divisions made in a leaf, the finer the hat will be, and the longer the time required to make the hat.

The worker sits on a low stool with a carefully arranged bundle of fibers, a hat form, and a smooth shell at hand. As the fiber is braided, it is frequently placed on the form and rubbed with the shell. When the hat is finished, it is placed in a barrel over burning sulphur to further bleach it.

The best-selling Panama hats occupy the time of the worker for a week or two. The finest of Panama hats may require as much as six months for making. Cheaper hats, made from a coarse palm, are also hand-made at the rate of one or two a day.

Jewelry

Fine jewelry is made in some of the villages. In the jeweler's shop, one finds his equipment consisting of a small table, a leather bellows, a piece of board charred on top, a pair of brass scales, a blow pipe, a pair of tweezers, a hammer, and a large wheel with wide spokes.

One asks to see the jewelry and learns that it is all made to order. In no place in the world can one find more beautiful filigree than is made in these Mayan villages.

In the villages of Yucatan, most work is carried on by slow, hard, primitive methods, but with many a joke and much laughter.

THE INLAND EMPIRE

Otis W. Freeman
EASTERN WASHINGTON COLLEGE OF EDUCATION
CHENEY, WASHINGTON

Characteristics of the Inland Empire

THE term "Inland Empire" is applied by its residents to an area tributary in a business way to the city of Spokane, more specifically to the area lying between the Cascades and Rocky Mountains, south to the middle of Oregon and southern Idaho, and north about one hundred miles into British Columbia. As thus defined, the Inland Empire includes eastern Washington, northern and central Idaho, Montana west of the Continental Divide, northeastern Oregon, and a strip of the Fraser River plateau and upper Columbia River drainage basin in British Columbia.

The Inland Empire has a north-south extent of about 400 miles and an east-west extent of 300 miles. The area covers approximately 100,000 square miles and contains about 800,000 inhabitants.

In relief, the area varies from a few hundred feet above sea level on the Columbia River between Washington and Oregon, to altitudes in excess of 12,000 feet elevation in the mountains of Idaho, Montana, and Canada. Regarding physical features, the largest section is included in the so-called Columbia Plateau and most of the remainder lies within the confines of the Rocky Mountain province.

The surface of the Columbia Plateau is not at all uniform. While stretches of many miles can be found on which the surface appears nearly level or gently sloping, yet hilly relief giving differences in elevation aggregating hundreds of feet is fully as characteristic. The best wheat raising section, known as the Palouse Region, centering in Whitman County on the eastern edge of Washington, has little level land and consists of rolling hills generally covered with a deep soil formed from dust, called *loess,* and *volcanic ash* deposited by the wind and mixed with humus from the abundant tall native grass and herbage. Somewhat similar hills also occur in the best wheat raising country of northern and northeastern Oregon and across the line from Washington into Idaho.

The Columbia Plateau was formed by enormous outpourings of lava that nearly covered the original land features with molten rock. In some places, high hill-tops of the old surface stand uncovered by lava, like Steptoe Butte and Kamiah Butte near Pullman, Washington. In other sections, after the period of vulcanism passed, the lava flows were warped upward and formed ranges, such as the Horse Heaven Hills, the Blue Mountains, and Badger Mountain. The outpourings of lava interfered with the normal drainage that had previously developed to the extent that some streams were dammed and sediment accumulated in the resulting lakes. Both the John Day Basin in Oregon and the Columbia Basin in Washington show such deposits.

Deep canyons of the Columbia and Snake rivers and their tributaries have been incised into the plateau surface. During the glacial period, the Columbia River was dammed with ice some miles west of the Grand Coulee Dam site. The melting water from the glaciers poured down across eastern Washington, removing much of the surface soil and cutting channels deep into the underlying basalt lava, leaving the Grand Coulee the largest eroded channel. Thus, glacial flood erosion created the so-called "scablands" of eastern Washington, a term applied by pioneers to the areas of bare lava rock that appear worthless for anything except scanty grazing. Water from the melting ice deposited silt, sand, and gravel over considerable areas adjacent to the melting ice and well out into the Columbia Basin into which the flood waters extended.

The Rocky Mountain section of the Inland Empire consists primarily of an old mountainous area that was first worn down to a rolling peneplain and was then uplifted to form a plateau. Since this last uplift, rivers have carved valleys, dissecting the plateau into so-called mountain ranges. Not all of the areas were uplifted to the same degree. This left a score or more of elongated valleys called *trenches,* with a general trend in a north-south direction. One of these trenches, the Rocky Mountain Trench, begins in the Bitterroot Valley of western Montana and extends northward through the Flathead, Kootenai, Columbia, upper Fraser, and upper Peace River valleys for a total length in excess of 1,200 miles. The activities of northeastern Washington, northeastern Idaho, and northwestern Montana and adjacent territories in British Columbia are concentrated in these trenches. Some of the trenches contain beautiful clear lakes like Flathead, Kootenai, and Slocan, above which the forested and snow-capped mountains rise to form grand scenery. The farms, the hay-land for the stock ranches, and the trading centers are all in these trenches. The best routes for highways and railroads are there also. Since the trenches extend north and south, and the demand for cross country travel is east and west, the transcontinental railroads and overland highways have not found it easy to cross the northern Rockies. Routes follow up one valley, over a pass, and down another valley to repeat the process further on, requiring rather long sinuous right of ways.

Spokane is fortunate in its location at the western end of the easiest route across the northern Rockies. All of the northern transcontinental railroads, even the Canadian Pacific, by means of a subsidiary line, pass through or connect with Spokane. This, more than any other factor, has made Spokane the great distributing, wholesale, and retail center of the Inland Empire. No other city in the Inland Empire has more than one-tenth the population of Spokane. Spokane's growth is also favored by convenient north-south routes from Walla Walla, Washington, to Canada, intersecting the east-west routes. Furthermore, the Spokane River at this point has falls that made possible, in the earlier days, the development of saw mills and flour mills. Spokane lies between lumbering and mining regions in the northeast and wheat sections to the south and west, with

dairying and stock raising reaching out in all directions. Thus, Spokane became a convenient point for the interchange of commodities among surrounding areas producing different products.

Mineral Resources

Most of the bed rock of the northern Rockies consists of granite, gneiss, and other igneous and metamorphic rocks. In areas of such crystalline rock, mineral deposits ordinarily occur. This holds true for the Inland Empire. The Coeur d' Alene district of northern Idaho is one of the largest lead-silver districts in the world, producing more than one-third of the nation's lead. Important deposits of lead, silver, and zinc also occur across the line in British Columbia. Gold deposits are widespread and hundreds of gold mines and prospects are in operation or undergoing development. While the Butte copper mines would hardly be included in the Inland Empire, yet producers of copper exist, notably at Lake Chelan in Washington.

The development of these metals and other metals of less importance provides employment for thousands of men. The profits from the mines and from the supply of goods furnished to the workers advanced the growth of supply centers like Spokane, Washington, and Nelson, British Columbia, to a noteworthy degree. Several of the tallest office buildings in Spokane and Yakima are monuments to profits made from the mining industry. One of the largest smelters in the world is located at Trail, British Columbia, a few miles north of the international boundary and serves both American and Canadian producers. Other reduction works serving the Inland Empire are located at Kellogg, Idaho; Tacoma, Washington; and Helena, Montana.

Climate

The climate of the Inland Empire is a dominant factor that affects the natural vegetation, the land utilization, and the distribution of population. Primarily, the climate is intermediate between the heavy rainfall and moderate range of temperature that are characteristic of the West Coast, and the light rainfall and extremes of temperature on the Great Plains in interior United States. The Cascade Mountains cause the mass of moisture-filled air that comes in from the Pacific to drop so much of the water it carries that the basins and plateaus to leeward (east) of the mountains receive less than ten inches of rainfall over large areas. In some places, rainfall is so scant that desert conditions prevail. From Snoqualmie Pass east to Ellensburg, Washington, a distance of sixty miles, the rainfall decreases from over ninety inches a year to under ten inches a year. As one leaves the desert, and travels north or east, the land becomes higher, and the rainfall increases to from twenty to forty inches annually, supporting good forest growth in the hills and mountains, and tall grass in the Palouse Region.

Areas receiving rainfall of from fifteen to twenty-five inches that were originally prairies of tall grass, form the best wheat lands of Washington and Oregon. Nearly seventy million bushels of wheat are produced annually in the Inland Empire; the heavier yields coming from the Palouse Region of Washington and from

similar areas of deep, fertile soil containing much humus developed under the cover of grass and supplied with sufficient rain for the needs of grain crops. The densest network of railroads covers the wheat section of the Inland Empire. Here the population has an even distribution.

Where less than ten or twelve inches of rainfall prevails, irrigation must be practiced to insure satisfactory crop yields. The desert soils contain a small amount of humus, because the natural vegetation is scanty, but otherwise these soils are fertile. These desert soils must be handled with care, however, because when farmed carelessly the wind may start blowing and drifting the soil. Under irrigation, where water is available, these dry lands yield excellent crops, being especially adapted to alfalfa, potatoes, apples and other fruits, sugar beets, hops, and vegetables. Not all the desert land can be irrigated because lack of water, rough relief, rocky soil, or some other reason prevents. However, over one million acres (1,500 square miles) are now undergoing development in the dry Columbia Basin alone, the water coming from the Grand Coulee Dam.

Forest Resources

The Inland Empire contains a variety of excellent timber. The largest area is covered with western yellow pine, a tree that is drought-resistant and of slow growth. Its timber is firm and well adapted for making doors, window sashes, floors, and other building items. The yellow pine can grow with as little as fifteen inches of rainfall a year, and is found on the hills, mountains, and even on part of the Columbia Plateau.

The largest stand of white pine left in the United States exists in the mountains of northern Idaho. In addition to western white pine the northern Rocky Mountain area contains important stands of larch (locally called tamarack), cedar, fir, and other trees. Standing timber amounts to many billions of board feet.

About two hundred saw mills are in operation in the Inland Empire, producing nearly 1,500,000,000 board feet a year. Formerly, horses, the logging railroads, and the rivers were used to bring the logs to market. Now the tractor and truck are commonly substituted, although a big drive of logs is annually sent down the Clearwater River to Lewiston, Idaho. In addition to sawed lumber, the forests provide pulp wood for paper, cedar logs for making shingles, and posts, poles, mine timber, ties, and fuel.

While some forest land has been unnecessarily devastated by fire and careless lumbering methods, there still exist extensive stands of virgin timber, much of which is in the National Forests. The policy of protection against fire and of methods of lumbering that protect the young growth from destruction should insure continued production of timber from the forests.

Agriculture and Stock Raising

Agriculture is the foundation of the business economy in the Inland Empire. Even among the mountains, the farmers living in the larger valleys and on the gentler slopes usually outnumber the miners, ranchers, and lumbermen. Many towns originally founded as sawmill centers or supply centers for the mines endure today because the country nearby has been

found suitable for agriculture. Several types of farming are carried on. Cash grain farming, which, in the Inland Empire, consists mainly of raising wheat, utilizes more cultivated land than all the other types of farming combined. In size, wheat farms average from one-half section (320 acres) to one section (640 acres), with a few farmers handling from one thousand to several thousand acres. By using large units of machinery and the practice of summer fallowing, whereby usually only half of the land is cropped each year, a family finds it possible to do all the required work on a large wheat farm, except during harvest, when a few extra men may be hired.

Before the World War, threshing machines and horse-drawn equipment predominated, and a farmer might require a crew of twenty or thirty men during the harvest. Now with the use of a *combine*, pulled by a tractor, from four to six men will harvest the same acreage. These new methods have cheapened the cost of production, and have lessened employment. Most of the agricultural supply centers in the wheat-growing areas have lost in population since 1920, as a result of the declining rural population and itinerant workers. Land abandonment has occurred on sub-marginal lands adjacent to the Columbia Basin Desert, but elsewhere the decline in population resulted partly from the consolidation of farms and the substitution of machinery for human labor.

Fruit Growing

A second type of farming is the intensive cultivation of fruit. Fruit farms are small, averaging about sixteen acres of irrigated orchard, and a commercial fruit district offers an interesting contrast to the extensive farming carried on in the wheat section. Instead of one family living on one section of land, there may be forty families on farms averaging sixteen acres in size. Houses, schools, and modern conveniences seem almost the same as those inside of city limits. Trading centers are separated by only a few miles instead of many miles.

Several hundred thousand acres are devoted to orchards within the Inland Empire. Trees number over six million and supply nearly one-third of all the apples raised commercially in the United States, besides quantities of cherries, peaches, pears, and other fruits. Only first-class fruit can pay the high transportation rates to distant markets. Therefore, no time nor labor is spared to produce fruit of superior quality. Work in the fruit orchards proceeds during most of the year. In the winter, the trees are pruned; in spring, the trees are sprayed several times; the ground is cultivated and irrigated; the fruit is thinned, if necessary, and finally the crop is harvested.

Dairying

Thousands of dairy farms are located in the Inland Empire, more especially in the mountain valleys, on land receiving a fair amount of rainfall, and having soil not adapted to wheat raising. The dairy farms average a few hundred acres in size. Usually the summer pasture is partly wooded, and posts and fuel may be obtained as a by-product from the farm. The most valuable land is that on which feed for the cows during the winter is raised. Preferably this is an irrigated meadow. Grain-hay,

rather than alfalfa or timothy, is raised for winter feed where only dry land is available. Not much silage is stored on the Inland Empire. Some butter is shipped to eastern markets, but most dairy products are consumed locally. Some stock is raised as a by-product on many dairy and grain farms. Large stock ranches are usually located near the mountains where summer pasture is available in the forest reserves or in rough, dry land unsuited for general tilled crops.

Cattle and sheep are the chief animals raised in the Inland Empire. Hardly enough pigs are kept to supply the local demand for pork, probably because corn is seldom raised since the summers are too dry for this grain. In some places specialty crops are important, such as sugar beets near Missoula, Montana, and in southern Idaho, and in the Yakima Valley of Washington; or peas for seed and for canning in southeastern Spokane County and near the Blue Mountains in Washington and Oregon. Chickens, turkeys, ducks, and other poultry are shipped from the Inland Empire to outside markets.

The development of the Columbia Basin by water supplied from the Grand Coulee project will increase the number of farms in the Inland Empire by possibly 25,000, and the population by, perhaps, 250,000 people. It is expected that nearly one million acres of land will be added to the productive area of Washington. After the project is completed, it will be several years before all of this irrigated land can be cultivated, and favorable markets for the products should then have developed.

Scenery and Wild Life

Other assets of the Inland Empire are the scenic and wild life resources. Besides providing vacation, hunting, and fishing facilities for residents, the forests, mountains, streams, big game, birds, and fish attract tourists and visitors from other states. Highways, national and state parks, hotels and camping grounds, fish hatcheries, and bird sanctuaries all help to popularize and make more attractive and useful the outdoor life.

Manufacturing

Manufacturing in the Inland Empire is mainly concerned with the processing of local raw materials and other types of manufactures that are not readily shipped in from a long distance. The processing plants depending on wood include: saw mills, shingle mills, sash and door factories, paper and pulp mills, box-wood, match blocks, and others. In the future, more intensive use of timber may be expected, requiring furniture factories, match factories, and more paper mills. Food processing plants include meat packing, especially at Spokane, flour mills at Spokane and many smaller centers, breweries, and canning plants for vegetables and fruits.

Baked goods, dairy products, and confectionery are produced in Spokane and in many of the smaller trade centers. Car shops and machine shops supply the local demand for repairs and provide other items of manufacture. Cement, lime, brick, and tile are bulky commodities, and their local manufacture is favored by the presence of the necessary raw materials — limestone and clay — as well as by

the high cost of transportation. Printing and publishing is another type of manufacture that developed because of local needs.

Aside from certain sawmill and mining settlements, cities of the Inland Empire form agricultural trade centers rather than manufacturing towns. Employees number fewer than in the usual city of equal population from the Mississippi River to New England, but the business sections are larger and finer in proportion. Northwestern cities have a clean appearance, partly because of limited manufacturing and partly because electricity is commonly substituted for coal as a source of power. The Northwest has more water power than any other section of North America and the completion of the Bonneville and Grand Coulee dams across the Columbia River should stimulate an expansion of manufactures. Woolens, chemicals, clay products, metal wares, and other products requiring more intensive use of wood than at present promise extensive development in the near future.

A Century of Development

The Indians practised no agriculture and used the Inland Empire for fishing, hunting, and gathering. In a little over a century, the white man's utilization of the same region has passed through several stages. First, the Inland Empire served as a source of furs, then followed placer gold mining, cattle and stock ranching, and sustenance farming. The third stage was exploitation of the soil for cash wheat production, followed in some parts by dairying, fruit and specialty crops. The fourth stage of intensive land use and development of mineral resources, hydroelectric power, and manufacturing, has but begun. It should lead to the growth of urban centers and to the production of goods for export in addition to production for local consumption.

The Inland Empire contains extensive resources that are only partly developed, and a continued increase in population should follow for several decades, at least. Some areas now thinly populated, like the Columbia Basin in Washington, can, when irrigated, support a quarter of a million people. An immediate need in the Inland Empire that will lead to efficient use of the available resources and prevent waste from careless exploitation of the soil and forests, is proper planning. As man learns to adjust himself to nature's requirements, the Inland Empire will become an even more favored area than at present for human settlement.

THE DIVISION OF MAPS AT THE LIBRARY OF CONGRESS

Clara Egli Le Gear
ASSISTANT CHIEF, DIVISION OF MAPS
LIBRARY OF CONGRESS, WASHINGTON, D. C.

Establishment and Early Growth

IN 1897, when the Library of Congress collections were moved from the United States Capitol to their permanent home across the park, a Division of Maps and Charts was established to administer a collection which then numbered about 48,600 geographical maps and 1,600 atlases. The Library of Congress itself was established in 1800, and in 1802, its first printed catalogue listed seven maps and six atlases.

Congress displayed an interest in maps as early as 1830, when the Library Committee of Congress instructed the Librarian to secure a copy of David H. Burr's *Atlas of New York,* 1829, and the best maps of the several States not already in the Library.[1] A proposal to establish a geographical department in the Library of Congress was made by Lieut. Edward B. Hunt, in an address before the American Association for the Advancement of Science at its annual meeting in Cleveland July 28 to August 2, 1853. The matter was submitted to Congress and referred to the Library Committee which made no recommendations.[1] Three years later, Mr. J. G. Kohl made a more moderate proposal for the organization of a cartographical department,[2] and again Congress shelved the suggestion.

Today the collection numbers 1,421,285 maps and 12,302 atlas volumes. It is one of the large and comprehensive collections of maps in America and is especially rich in American maps. These comprise about two-thirds of the collection. The Colonial and Revolutionary War periods are well represented by several collections of original manuscript maps. They are briefly described as follows:

1. The Faden Collection of about 100 maps and plans was acquired in 1864. A special appropriation enabled the Library to purchase it from Edward Everett Hale who had published a 13-page catalogue describing it.[3] The collection had been obtained by a Reverend Mr. Converse at the sale of the estate of William Faden, geographer to the King. From Mr. Converse it passed into the possession of Edward Everett Hale's father, Nathan Hale.

2. The Howe Collection of 72 manuscript maps was formed by Admiral Lord Richard Howe, commander of the British fleet in America, 1776-1777, and consists of maps of various places on the American coast, the West Indies and the Philippine Islands. It was acquired in 1905 from the Howe family.

3. The Rochambeau Collection of 67 maps and a manuscript atlas had belonged to the Comte de Rochambeau, general of the French army in America during the Revolution, and was acquired in 1883 from the Rochambeau family. Thirty-eight of the maps are original, and carefully drawn

to scale by engineers of the French army. The whole collection covers the period of the operations of the French land and naval forces in America. The atlas contains plans of the 54 encampments of the French army on its march from Yorktown, Virginia, to Boston, Massachusetts, July 1 to December 2, 1782.

Photostats

To aid students of early American cartography and history, photostats of manuscript and rare maps in other institutions have been acquired. Notable among these are the Erskine-DeWitt collection of maps made for General George Washington, from the New York Historical Society; the Clinton collection used by Sir Henry Clinton while commanding the British forces in North America, from the William L. Clements Library; the Sparks Collection, from the Cornell University Library, the manuscript maps in the British Museum and the British Public Record Office, as well as many from French, German, Portuguese, and Spanish archives.

Special Collections

Other special collections that might be mentioned are the Lowery Collection of 750 maps of the Spanish possessions within the present limits of the United States, 1502-1820, bequeathed by the late Woodbury Lowery[4]; the Kohl Collection of 474 manuscript tracings of rare maps relating to the discovery and early history of America[5] transferred to the Library of Congress by the Department of State in 1903; and the Harrisse Collection of a dozen rare manuscript maps and approximately 600 tracings, bequeathed by the late Henry Harrisse.

Through the generosity of Mr. Andrew W. Mellon, the Library of Congress acquired thirty-eight rare Chinese maps and atlases. Thirty-one are manuscript and seven are printed from wood engravings. Two of the atlases date back to the Ming period, between 1368 and 1644 A. D. This gift, added to the Chinese, Japanese, and Korean maps already in the collection places the Library abreast of all institutions and collections outside of China in the wealth and variety of its oriental maps.

Fire-Hazard Maps

The Library's largest single collection of maps numbers more than 345,000 sheets. The Sanborn Map Company, established in 1866, has been publishing maps of every city and town in the United States that presents any fire hazards. More than 13,000 localities have been mapped on such large scales as to indicate every structure's height, projections, building materials, water facilities, etc., etc.

Atlases and Special Maps

The atlas collection boasts of 45 editions of Claudius Potlemy's *Geography;* 68 editions of Abraham Ortelius' *Theatrum Orbis Terrarum;* 37 editions of Gerard Mercator's *Atlas;* 27 editions of Blaeu atlases in 82 volumes; 19 copies of Des Barres' *Atlantic Neptune;* and a comprehensive set of county atlases of the United States.

The Division's treasures include 11 portolan charts and 2 portolan atlases; a little manuscript globe inside an armillary sphere of 11 rings, made by

Caspar Vöpel in 1543; Samuel de Champlain's map, drawn on vellum, of parts of New England and Canada, 1608; Joan Vingboon's manuscript map of New Amsterdam, 1670; 7 manuscript maps made or annotated by George Washington; an original manuscript copy of Pierre Charles L'Enfant's plan of the city of Washington, 1791; 13 manuscript maps attributed to Lewis and Clark, and many others too numerous to mention.

In addition to cadastral, political, topographic, geological, hydrographic, climatological and other types of maps, birds'-eye views of cities, profiles of railroads, canals, etc., and aerial photographs are filed in the Division of Maps. Astronomical, medical, statistical, historical, genealogical charts, etc., etc., are, however, not filed.

A Visit to the Division of Maps

The Division of Maps is located on the north side of the main floor of the Library building. It maintains a separate reading room. A collection of recent reference atlases and gazetteers is readily available to consultants as are also the two latest issues of upward of 50 geographical periodicals. On the walls of the reading room are displayed maps of current interest. Some rarer maps are exhibited in glass cases in the foyer of the Division and in the general exhibition halls.

The chief functions of the Division are to render geographical service to members of Congress, to various branches of the government, and to the public in all parts of the United States and abroad. This is accomplished by supplying materials to readers in the Library, by lending them to the Capitol and other federal offices of the District of Columbia, by answering the geographical inquiries of correspondents, and by supplying maps for the making of photostats and photographs.

Every facility for the ready consultation of material is placed at the disposal of persons who are able to come to the Division of Maps. The staff is, unfortunately, not sufficiently large to render unlimited geographical service. It cannot undertake to compile bibliographies of maps or bibliographies on subjects of geographical interest. The Division is a great repository of maps, but has none for distribution.

The map collections have been used repeatedly in connection with important legal matters, for they are comprehensive and are likely to contain crucial maps. Reproductions of them have been presented as evidence in many boundary cases. A number of persons engaged in compiling bibliographies of maps have found it profitable to begin or end their work at the Library of Congress.

Acquisition of Maps and Atlases

Maps and atlases are acquired by gift from generous donors; by copyright (two copies of each map that has been deposited for copyright); by transfer from other departments of the federal government and from State, county, and municipal bureaus; by international exchange with other governments; by exchange with other institutions; and by purchase. The only way in which the Library can dispose of any of its duplicate material is to exchange it with other institutions or individuals on a piece-for-piece, or a priced exchange basis.

Maps require special treatment because of their variable sizes and formats. Some are received rolled, some shellaced and fastened to rods, some folded in stiff bindings, some mounted, some unmounted. The first step in the process of incorporating them into the collection is to unfold or unroll them, to remove the rods and the stiff covers. The next steps are to sort, stamp, count and accession them. Maps, with few exceptions, are filed flat. Each map, in one or more sheets, is placed in a jacket or folder of heavy manila paper which is marked in the upper left corner by printing in ink the geographical area, date of publication, scale, and author, compiler or publisher. Those that form parts of sets are specially handled. Maps too large to file by folding only one way are dissected. This does away with cross-folding which is injurious to maps.

The sheet map collection is filed in steel map cases. Each unit consists of a double case, with drawers on two sides. There are four tiers of sixteen drawers each on each of the two sides. The drawers measure 42 inches long by 24 inches (or 30 inches) wide and 2⅛ inches high. Between 30 and 50 maps can be filed in one drawer.

Chiefs of the Division of Maps

Philip Lee Phillips became the Division's first chief and retained this office until his death in January 1924. His love of maps developed early in a career that began and ended at the Library of Congress. While an assistant under Dr. Ainsworth R. Spofford he gathered together the material for his *List of Maps of America in the Library of Congress,* which was published in 1901. This volume and the *List of Geographical Atlases in the Library of Congress,* 4 volumes, 1909-1920, compiled under his direction are probably the Division's best-known publications. An unpublished monument to Mr. Phillips' industry remains in the Division. It is his "Bibliography of Cartography, or A Descriptive List of Books and Magazine Articles relating to Maps, Map Makers and Views," which comprises 19 typewritten volumes and 7 supplemental trays of cards.

Colonel Lawrence Martin became the Division's second chief in October 1924. He has done much to round out the collections by personal contacts with map publishing organizations, and with institutions having map collections, as well as by correspondence. Since 1923 the collection has been increased by 400,000 maps and atlases, exclusive of duplicates. Colonel Martin has made intensive studies of a number of American maps, including John Mitchell's "British and French Dominions in North America," 1755, John Filson's "Map of Kentucke," 1785, George Washington's maps and survey plats, John Melish's "Map of the United States," 1814, and John Disturnell's "Mapa de los Estados Unidos de Mejico," 1828-1858. During the past year, Colonel Martin edited for the United States Constitution Sesquicentennial Commission a series of 18 maps depicting the United States and each of the original States at the time of the formation of the Constitution.

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THE PLACE OF GEOGRAPHY IN THE BRITISH EDUCATIONAL SYSTEM

TREVOR LLOYD
GRADUATE STUDENT, CLARK UNIVERSITY
WORCESTER, MASSACHUSETTS

THE chief difficulty about explaining the position of geography in the British educational system is a matter of definition. It is not yet easy to get geographers to agree upon a definition of their own subject, and it seems quite impossible to get the British to agree about their educational system. In truth, there is no such thing. The schools of Great Britain have grown up during the centuries from different roots, are adapted to serve different purposes, and are not under the control of any single government agency. They are another example of the British custom of considering a thing perfectly all right if it works, whatever the logical mind may think about it.

Types of Schools

In order to describe the status of geography in Great Britain, some understanding of the types of schools is required. Three chief kinds of school exist — those financed and controlled by some form of public authority; those not financed, but receiving some supervision from a public authority; and finally, those completely free from financial or other control. This third type of school is well represented by the so-called *"Public Schools"* which are, in fact, *exceptionally private*. To them pupils are sent less for the academic training they will receive than for social distinction, to gain skill at games, or in order the more easily to enter Oxford, or Cambridge, Government service, or business.

The education of the typical boy or girl in England ends at fourteen, or so, at the conclusion of the Senior school. The Secondary schools are reserved for a small proportion of the children, and admission to them is either by the payment of fees and the passing of an entrance examination, or by scholarships to a limited number of free places to be filled by much harder examinations. Thus it is possible for the poor child to get a High school education, but to do it he must be much more clever than the rich one. In Wales and in Scotland, countries with more effective democracy than England, the Secondary schools are more accessible to the less well off. In all three countries, only

a small proportion of those attending the elementary schools reach the Secondary schools, and of these a much smaller proportion ever get as far as the University. The University in Great Britain is used mainly by those intending to follow a professional career, and it is not designed to provide a broad cultural training for young men and women while they decide on their future careers. Because of the highly selective type of entrance examination and the small numbers, it is possible to retain a high academic standard in degree work.

Courses of Study and Textbooks

The lack of any system in the schools of England is well shown by the absence of prescribed Courses of Study determined by governmental bodies. The Schools are practically a law unto themselves, the general standard of the work being assured by Supervisers, School Inspectors, and by the results obtained by pupils sitting for public examinations. Prescribed textbooks are not met with. A large educational authority, such as the London County Council, publishes a list of textbooks which have been approved as suitable for use, and the schools may select from them those they intend to use. This means that there is great variety in the books available. A glance at the Publishers' catalogues will show that hundreds of textbooks are available for School Geography, although some of them are used more extensively than others.

Historical Survey

The absence of prescribed texts and syllabuses makes it exceedingly difficult to describe the work done in school geography. Perhaps here the best approach is the historical one to be followed by a brief summary of some of the types of work being done.

Geography has long been an elementary school subject in Britain. As befitted a nation of navigators, it early consisted very largely in describing exploration and the coastlines of new countries. This deteriorated in the hands of the unimaginative teacher into a recital of capes and bays, estuaries and headlands, without any human interest or usefulness. T. H. Huxley in his "Physiography" attempted to put new life into the subject by encouraging the study of nature. His book dealt with rivers and mountains, the oceans, the weather, and so on, and was intended to be handled in a practical way. No subject is so interesting, however, but that the mediocre teacher can make it boring, and Physiography in the schools went the way of its predecessor and became the learning of lists of volcanoes, ocean depths, and river lengths.

New life was put into school geography in Britain in the years before the World War by men who were themselves usually not trained Geographers. It is impossible to measure the good done by men like Fairgrieve, who taught teachers to make geography a living subject. The National Organisation of Geography Teachers, known as the Geographical Association, by the publication of its Journal "The Geography Teacher," by the organisation of conferences, and not the least by providing a forum for outstanding teachers, raised the status of the subject enormously. Continual pressure, largely from the teachers, has resulted in geography now being a subject having the same standing as

any other subject in the best schools, and receiving recognition in even the most backward schools. This development went on side by side with that in the Universities, and the schools owe a great deal to outstanding University men, both for their public advocacy of the needs of the subject and their provision of textbooks and other teaching material.

The Royal Geographical Society, as far back as 1834, experimented with a part-time lecturer in Geography in the University of London, but it was not a success, and, although the British Association for the Advancement of Science had an important section devoted to Geography independent from Geology, from 1851 onwards, it was not until 1885 that an enquiry into the position of geography in the Schools and Universities was set up. As a result of this report, a young man named Halford J. Mackinder was appointed Reader in Geography at the University of Oxford. His sole predecessor in the position had been Richard Hakluyt the Elizabethan geographer, and Mackinder recalls that his first class was attended by three students. Shortly afterwards, the University of Manchester, maintaining the reputation of that city for being among the most progressive in the country, appointed A. J. Herbertson as Lecturer in Geography. From this modest beginning, the subject spread to the other Universities. Today it is taught in every University in the country, and most of them have full Professorships with three or four assistants. Oxford and Cambridge, curiously enough, were two of the most recent Universities to set up full Professorships in geography although both of them have maintained excellent teaching staffs in geography for many years. In most universities, it is now possible to take an Honours degree in Geography—requiring three or four years of study, often of Geography alone, together with a Thesis. The M.A. degree may also be taken, and in the better-staffed Universities a Ph. D. degree may follow. It is not the custom in Britain to require the Ph. D. of University teachers, as it often is in the United States, and the M. A. is considered to represent a high degree of attainment.

Geography in the Schools

It is impossible to point to any particular type of Geography as being peculiarly British, such as may be done in the case of France. For many years the Royal Geographical Society has represented the most advanced types of cartography and exploration, although it is now turning its attention, in part, to other fields. Some Universities tend to be more interested in teaching Economic Geography or Human Geography or Historical Geography, although all of them insist on a wide general basis of training.

The position of Geography in the Schools may be summarised as being strong, with a large number of well-trained teachers available. The members of the Geographical Association number about 3,000 and many of them are teachers possessing Honours degrees in the subject. It has long been the custom for Secondary school work to be taught by specialists, and it is becoming increasingly the case in the Senior Schools.

In both the Junior and Senior Schools, emphasis is often placed up-

on practical Geography. Home Geography finds a place throughout the course, so that the pupils learn by doing more than by merely reading. The textbook does not hold the centre of the stage, and at best it only supplements the work of the teacher. Local surveys are undertaken, weather records kept, numerous visits made to docks and factories, and in a number of schools ambitious school journeys undertaken, some of them reaching the continent of Europe.

A relatively recent scheme is that of adopting a tramp steamer, the school, or certain classes in the school, being responsible for maintaining contact with the ship's crew on their wandering around the world. So successful has this plan been, and so widespread has it become, that textbooks have been written for use in connection with it.

The Land Utilization Survey of Great Britain, of which the maps are being issued by the Government, although done in part by High School and University students, is really an extension of the type of local survey long carried on by many Junior and Senior schools. In its final form it is a tribute to the thoroughness of the geography teaching going on in the schools of the country and the emphasis that they have placed upon practical matters.

The Secondary or Higher Schools overlap in age and in work with the Senior Schools, as some of them begin at eleven years of age and provide a five or six years course. Geography is taught throughout the schools for, at any rate, the first three or four years, and in most schools geography may be taken in the School Leaving Certificate which is usually passed at about the age of sixteen. The number of children taking Geography in this examination is slightly greater than the number taking History. As the examination work comes at the end of a thorough grounding in the subject, a high standard is often reached. Some schools offer Geography for a further two years, leading to the Higher School Certificate, which gives admission to the second year in the University. In such a course, the greater part of the time is likely to be spent on the one subject, and textbooks designed for such Courses are suitable for some College work in the United States.

Geography in the University

The student entering the University may take Geography in one of two ways. The subject may be one of three or four subjects that are taken for the Pass Degree, or it may be the sole subject, or taken together with one other in the Honours Degree. At the University of Cambridge and some others, an Honours B. A. in Geography involves the study of the subject alone for three years. The increasing number of Honours graduates being produced by the Universities has meant that research work can now be done more thoroughly. The Association of British Geographers, founded a few years ago, provides a forum for the discussion of new work and its Proceedings is a periodical in which outstanding work is published.

Wide Interest in Geography

A striking thing about the status of Geography in Great Britain is that the subject is still one that holds very great interest for the non-professional

geographers. Much of the best work published is still done by Colonial officials, amateur explorers, and specialists in other fields. The programmes of the annual meetings of the Geography Section of the British Association for the Advancement of Science include work by all types of geographers. In addition, the Royal Geographical Society which publishes the "Geographical Journal," and the Geographical Association which publishes "Geography," and also the Royal Scottish Geographical Society and its publication "The Scottish Geographical Magazine" provide geographical information of the highest type.

The best definition of Geography as taught in the schools of Great Britain is still that of James Fairgrieve, written many years ago:

"To train future citizens to imagine accurately the conditions of the great world stage, and so to help them to think sanely about political and social problems in the world around them."

Two books may be recommended as giving the best detailed discussion of how this aim is carried into effect.

"Geography in the School," James Fairgrieve, University of London Press, gives an excellent account of the content of the subject and the teaching methods followed in elementary schools.

"A Memorandum on the Teaching of Geography in Secondary Schools," Second Edition, 1939, published for the Assistant Masters Association by George Philip, London, is a first-class statement of the history of School Geography and its present position in the higher schools.

THE RESPONSIBILITY OF GEOGRAPHERS IN LAND PLANNING

RUBEN L. PARSON
STATE TEACHERS COLLEGE
TROY, ALABAMA

Conservation, Land Planning, and Geography

SINCE the advent of a modern conservation and planning movement in the United States, American geographers have enjoyed increasing usefulness in various technical and advisory capacities. Numerous conservation and planning agencies — national, regional, state, and local — have employed the services of geographers. Many successful undertakings bear the stamp of good geography. On the other hand, some projects reveal ignorance of fundamental geographic knowledge. Land planning, without the aid of geography, lacks basic information necessary to success. Land planning presents the opportunity for the practical application of geographic principles to human needs.

In response to this comparatively recent demand made upon the science of geography, courses for the preparation and training of technical experts have been substantially improved. Graduate courses have been revised, new courses added, and books published to satisfy needs in the practical fields of conservation and land planing. Real innovations are few, but geographers find in land planning an opportunity to incorporate, *in a practical way*, geographic concepts and disciplines previously developed.

Nature and Objectives of Land Planning

Let us consider the nature of land planning, its zone of operation, and its objectives. Modern planning proposes "more good for more people, over a longer period of time" by more judicious use of available resources. For agriculturists, land planning observes the three primary land uses — agriculture, forestry, and grazing.

In a broader interpretation, land planning includes the whole land surface; its occupance—industrial, commercial, or agrarian; its cover — grass, trees, houses, or factories. It includes consideration of surface space occupied by structures for extraction of materials from below the surface, such as mine tipples, dumps, and other items that complicate the surface arrangement. In fact, *land planning, by directing man's energies towards efficient utilization and intelligent development of physical, economic, and cultural attributes of place, designs the adaptation of human occupance to the natural environment.*

Land planning is important, because it concerns our greatest natural resource — our primary source of wealth — *the land.* Land planning is basic to other planning, just as primary production is basic to industry and commerce.

During our brief national history, much of our vast land resources have

been dissipated. Soil has been destroyed and human energy wasted in the cultivation of excessive areas to produce supplies more abundant than we have been able to distribute. Many land areas bear witness to the sequence of clearing, exploitation, erosion, and final abandonment. We have been made increasingly aware that social stewardship of our land must be accomplished. Such stewardship is what land planning strives to attain.

To assign every unit of land to the use that will best serve human needs; to apportion the land areas possessing productivity according to their capacity to yield; to remedy maladjustments between land economy and land quality; to conserve human energies wastefully expended; to curb soil destruction incidental to land abuse; to preserve land resources as inexhaustible wealth without curtailing economical production:—these are among the ultimate objectives of land planning.

Subordination of private ownership to collective enterprise; gravitation of people towards areas of superior quality; conservation of areas liable to destruction; and rehabilitation, where possible, of those already damaged:—these are immediate accomplishments sought by rural zoning and by other means.

Such allocation of land to agriculture, forestry, grazing, industry, commerce, residence, and recreation as will most efficiently serve its occupants, is the ideal toward which land planning sets its course. In substantial measure, the future of our communities, our state, and our nation, depends upon the appropriate utilization of our land resources.

Geography and Land Planning

Geography treats of *places, distribution,* and *relationships.* A knowledge of these items, individually and collectively, is fundamental to efficient land planning. Without adequate appreciation and application of them, land planning cannot accomplish its purpose. *Place and attributes of place have been termed "the essence of geography."* The characteristics of a given place, the limits about that place to which those characteristics extend, and the location of the area thus delimited, relative to other places and areas, must be clearly defined before actual planning can properly begin. Quality of place attributes is the first consideration; relative position and comparative size of distinguishable unit areas, the second; and, in the evolution of a master plan for land utilization, the third and last consideration is the whole pattern of units.

Actual and adjacent location is of immediate significance in land planning. A major factor contributing to the established or potential utility of any particular area is its distance from other areas with similar or contrasting conditions. For example, a land-use plan takes into account accessibility to market, competitive sources of supply or availability of complementary raw materials from places more or less remote.

The trained geographer observes and considers the component elements of the natural environment as a whole, weighing the significance of one element against that of another and grading them according to the peculiar influence of each in a particular situation. The geographer's summary of

physical conditions becomes the land planner's line of departure.

Finally, the geographer is more concerned with the association of environmental factors than with their individuality. He strives to understand the physical and cultural element in relation one to another rather than as separate entities capable of complete segregation. He isolates elements for analysis only in order to appreciate inter-relationships. Here the trained geographer has an advantage in land planning, because geography presents the composite pattern of natural environment and human occupance. In the unit-area method of land classification, developed by geographers engaged in land planning, the concept of regions and the concept of composites are nicely combined for practical application in planning.

Other Sciences and Land Planning

Many related sciences contribute to the geographic composite—climatology, geology, physiography, pedology (soil science), ecology, demography (a study of population), economics, and others. Along with the application of geography in land planning, the assistance that these sciences lend becomes increasingly pertinent. In the inventory of resources that precedes actual planning, two physical sciences, geology and pedology, make distinctive and invaluable contributions. Investigation of soils is essential because conservation of soil is fundamental in land planning. Geology takes stock of sub-surface resources, among which water is of primary importance. Water supply exerts its influence over occupance,—abundance and availability of water tending to intensity of land use and density of population.

To develop and perfect its design, land planning (applied geography) utilizes certain phases of economics, agriculture, forestry, hydrology, engineering, and commerce, integrating a variety of functions that result in a complex, progressive activity.

Land planning promises new frontiers in geography and related sciences. Its achievements prove commensurate with the concerted endeavor that underlies each step of progress.

GEOGRAPHY IN A TEACHER TRAINING INSTITUTION

ROBERT M. BROWN
RHODE ISLAND COLLEGE OF EDUCATION
PROVIDENCE

The Content of the Course

THE teaching of geography to be effective must be conditioned on the immediate and the future needs of the students. This does not deny geography a place as a cultural subject, but it does insist that if there is a specific reason why geography is placed in the curriculum, that reason should be constantly in mind when courses are selected and when teachers present them. Obviously then, in a teacher training institution, geography must be taught from the standpoint of students who, in time, may teach geography. This involves a knowledge of the subject matter, an appreciation of the reason why geography is taught, and the techniques which presentation demands. To a large degree, the techniques are discovered in professional courses and in the apprenticeship; but there are some, inherent in the phase of geography taught, that must be handled by the geography teacher. With the general lack of geographic knowledge that obtains in candidates applying for admission to teacher training institutions, it seems unwise to devote much time to courses involving methods of presentation. Many candidates who enter the freshman class have not had geography for at least four years and a few have not studied geography for six years, and if the time allotment for geography is three hours per week for one year, there is a lot of ground to cover in a short time.

In a way, it is sometimes unfortunate that courses have to carry a specific name. One is apt to follow the fashion of the times and fill the catalog with titles that breathe of modernity. Some catalogs list numerous courses of specific nature when a general, broad course touching on many phases of the subject is preferable. Interspersed with such a course there might be studied, as types of presentation, treatments of regional geography, or economic geography, or human geography. If the catalogs are correctly interpreted, many of the courses in teacher training institutions are open to all-comers, since there appears to be no prerequisites for them. If this is true, each course must be presented as an elementary, or first course, in college geography. Such a condition could be avoided by making a first course of so general and broad a nature that it may serve as a preparation primarily for the work of the students as teachers, and also for any future courses taken in college. In no other way can the gaps of elementary school geography be filled and a well-rounded course for future teachers be inaugurated.

The Literature of the Subject

It is dismaying at times to read the lists of state or school adoptions of textbooks. It sounds so much like regimentation; but there is the comforting

thought that in all likelihood, the supplementary lists of books may be large. Certainly in a teacher training institution, the students should be introduced to a great array of books suitable for use in the schools where they expect to teach. There seems to be a great advantage and no deleterious result in parceling out to a class of thirty pupils, textbooks by six different authors on the basis of five pupils using books by the same author. Such a process in the discussion of any topic would give a wider scope and greater variety to it than could be obtained where all used the same textbook.

In the grade schools, changing a textbook, judging from the letters received, appears to be a serious problem. Requests for opinions as to the best textbook for a certain grade are practically unanswerable, so generally good are all the publications. One may have a bias or a crotchet and send the questioner an answer, but it is hardly a solution. With six sets of textbooks, the oldest and probably the most worn can be changed for a recent one without the expense of outfitting the entire system with a new set of textbooks. In this way new material comes to the schoolroom every year, the worry over the book situation is gone, and best of all the pupils are benefited. Certainly with the number of textbooks increasing as they have during recent years, the learner should not be limited to any particular style or type of treatment.

All this has to do with current publications intended for direct schoolroom use; but beyond these, there is a field which is almost universally neglected, namely, the first-hand contributions from the present and the past. They have been neglected largely because of the difficulty in collecting them. A source book in geography is needed in order to carry out this idea. Herbertson published a series on the continents a number of years ago, but the extracts, drawn largely from the field of exploration, were brief and wholly descriptive. *The National Geographic Magazine,* the *Journal of Geography,* and geographic articles in other magazines and newspapers provide valuable current geographic information supplementing the standard textbook treatment.

Current Hypotheses

A teacher has to become familiar with current educational hypotheses, and following the requests of his superior officer, swallow them whole, adapt his theories to them, or neglect them. It is probable that many of them will be forgotten after a few years. At the same time, there is some value in these hypotheses since they are types of experimentation, and the good part of them becomes incorporated in the teaching technique somewhat unconsciously while the bad part is discarded. When the writer began his teaching, he was told that the teacher should be active and the pupils quiet, absorbing the wisdom of the ages like little sponges; now we learn that the pupils should be active and the teacher a quiet shadowy factor in the educational process.

The current hypothesis that is worrying some geographers is integration. Some teachers think it is a fatal blow to geography teaching in the schools; others are apathetic since it has not materially affected them; and still others have accepted it and

are making an attempt to comply with its requirements. It has, like many hypotheses in the past, its good features, and when the stress is gone, geography teaching will be improved. The protagonists of the hypothesis claim that a mature mind, even though specialized in a particular field of thought, does not use just the factors of his particular occupation, but summons all the information available, whatever its source, to reach his conclusion. This can be accepted, but man must have the information in order to use it. He cannot call it out of a clear sky, if he does not know about it. In order to integrate, one has to have something to integrate. In the university one of my professors of geology claimed that he could go no farther in a certain direction because he was ignorant of chemistry. He could not lure the chemical knowledge he needed, since he did not quite know what that was. He continually bemoaned the fact that he neglected chemistry in his education. He did not possess one of the necessary factors needed for the integration desired.

There is probably little information or training which cannot be used in the pursuit of a solution in any line of investigation. But one must have the information, or the knowledge of its import, in order to have it available. Curricula are planned by the experience of the years to yield the elements of the more common factors in thinking. It is likely that subject teachers have been in error in limiting their thought to the narrow confines of what is called subject matter as laid down by a textbook. Climatic factors are relegated to geography, but it is difficult to understand how botany, unless it is purely a study of classification, can be developed without a knowledge of climates, and I suspect the majority of the botany teachers are without this desirable information. Such a statement concerning other factors may be made of any line of study. In order to reach a conclusion in geography, many factors of many lines of study may enter the argument, but in the end it is a conclusion of geography. One cannot learn geography by studying history and now and then using a factor of geography, but if one has learned geography it is undeniable that the study of history has been broadened.

Man seeks his conclusions along specific lines of thought, but to be accurate he needs a knowledge beyond the meticulous bounds of the subject matter, so called, of his specialty, and the use of this material is a type of integration. His aim is in a definite branch of learning, — in engineering, in geology, or in the working out of a problem in the line of his occupation, in agriculture, in manufacturing. Man is primarily a specialist, not a Jack-of-all-trades; he must study the common branches of learning in order to prepare himself; if he studies branches other than his single specialty, he will be better prepared to reach the solution he wishes to obtain.

THE STATUS OF GEOGRAPHY IN NEW ENGLAND TEACHER TRAINING INSTITUTIONS

ELIZABETH E. GREGORY
KEENE TEACHERS COLLEGE
KEENE, NEW HAMPSHIRE

THIS study includes a survey of the types of geography courses offered in New England schools, an examination of the relative importance of content and method courses, and a brief analysis of the various ways in which the techniques of teaching geography are presented. Of necessity such a study is general, and may be said to indicate trends of professional preparation in New England schools.

Questionnaires, interviews, and recent catalogs contribute to the information contained in this paper. Of the twenty-seven New England normal schools and teachers colleges, supported mainly by public funds, twenty-three have supplied satisfactory information in a usable form. Massachusetts colleges were in the throes of reorganization of programs, but most of the teachers kindly provided lists of courses as they are taught at present with indications in some instances as to changes which they expect in the immediate future.

Variations in Programs

Some work in geography is required in every New England school reporting, particularly in the curricula for elementary and rural school teachers. There is, however, wide variation in the programs of study. Three distinct types have been noted. *First,* a four-year teachers college that offers content courses in geography, methods in the education department, but provides little opportunity for training special teachers of geography. *Second,* a four-year teachers college that requires two courses and offers a variety of elective courses to enable prospective teachers to specialize in geography. *Third,* a four-year teachers college that requires from two to four courses, but considers most of its courses from the professional point of view. There are several schools of each type in New England and there are a number of schools that will not fit into any one of these three types.

Type One. Two courses in geography are required in the elementary curriculum of the first type of school, one in Principles of Human Geography and one in Regional Geography. In the regional course, selected regions are studied, one being the home region. Methods are presented in a "Curriculum Materials and Techniques of Teaching" course by the education department, the subject-matter specialists coöperating with the director of the training school. In the secondary curriculum of this school, two geography courses are also required, but here Economic Geography is substituted for Regional Geography.

Type Two. Type Two requires two courses in geography in both elementary and secondary curricula, and students elect other courses according to their special fields of interest. The two required courses are: first, a Physiographic Introduction to Geog-

raphy, and second, Economic Geography. The elective courses include: Problems in Teaching Geography; Geology; Mineralogy; Principles of Political Geography; Regional Geography; Natural Resources of the United States; and Geography and World Affairs. Thus in this type of school it is possible to train students as specialists in geography.

Type Three. This school is a teachers college in which many courses are professionalized. In the elementary curriculum, students are required to take four courses in geography as follows: first, Geography for Grades 3 and 4; second, Geography for Grade 5; third, Geography for Grade 6; fourth, Geography for Grades 7 and 8. In the secondary course, students are required to take Geography for the Junior High School and Commercial Geography. While these courses are directed toward the professional point of view, it is expected that considerable subject matter background at the college level will be included in each course.

So much for the three types of schools. Not all schools may be so grouped, but most of them are basically similar to one of the above types.

Geography courses are listed in various departments of the schools. In fifteen of the twenty-three schools, geography is classified in the Social Studies or Social Science department; in six schools, in a Geography department; in one school, in the department of Geography and Geology; and in another school, in the department of Science. Department classifications are generalizations for convenience and accordingly must not be taken too seriously. For example, in one case, Social Studies 202 is a course in the Principles of Human Geography. The Social Studies or Social Science department in the teachers college usually does not refer to integration in the teaching of materials, but rather to the grouping of courses and faculty in closely related fields.

The course headings of Table I follow, in general, those used by Dr. Floyd F. Cunningham for a survey of Geography in the teachers colleges of the United States in 1933.

Content and Methods Courses

Fifteen course headings are listed for content courses, while five course headings serve to classify the methods courses. A total of 122 courses are offered, of which 97 are content courses and 25 are methods courses. Ten of the 97 content courses are listed as somewhat professionalized. In this paper a professionalized course means one that is dominantly content. It includes suggestions as to techniques of teaching and illustrates these by observing classes in a model school. The larger part of a professionalized course is subject matter at the college level.

The most outstanding single course is the Principles of Human Geography with twenty out of the twenty-three schools requiring the course as a foundation for further geographic study. In only two cases is this course professionalized. There is a strong feeling that in this basic work, methods should play no part, but should appear later in the program. The second most outstanding course is Economic Geography (including commercial and industrial geography). This subject is offered in sixteen schools. It is required in nine

schools and is somewhat professionalized in three schools.

Regional Courses

Broader relationships may be seen by grouping the courses for purposes of interpretation. Regional courses make up the largest group offered in New England normal schools and teachers colleges. Thirty-five courses are offered, and eighteen schools require some work in regional geography. These vary from the short regional course presented in the three-year normal school curriculum for elementary and rural teachers, to the series of continental studies planned for the geography majors or minors who are preparing for secondary school teaching in four-year teachers colleges. The regional courses are of three types: (1) courses that present selected types of regions according to the interests and needs of the students; (2) continental courses that present continents of the western or eastern hemisphere, or that provide for a choice of continents, usually Europe or North America; and (3) courses listed as studies of continents, North America, Europe, South America, etc. These regional courses are dominantly content courses, only five of them being somewhat professionalized.

The Methods Group

The next most important group of courses is the methods group, with thirteen schools requiring students who prepare for elementary schools to take at least one course in methods in geography. The general methods course is a requirement in four schools. Three schools require one course selected from the following: lower grade methods, upper grade methods, and junior high school methods, according to the curriculum selected by the student.

Of the twenty courses classified as methods courses, seven are so organized as to present subject matter as well as techniques of teaching. The idea is that one cannot teach without demonstrating teaching techniques — either good or poor, therefore, correct techniques and subject matter should be presented simultaneously. For example, a class studying geography for the fifth grade is expected to cover the college subject matter for North America, and, at the same time, acquire the techniques necessary for presenting the study of North America to a fifth grade class. One way of handling this difficult problem is to give the students reading assignments in subject matter at the college level, and in the class period, using fifth grade textbooks, demonstrate the actual techniques involved in the use of texts, maps, and pictures that may be developed with a class of fifth grade students. Unit tests check on the two phases of work,—knowledge of subject matter at the college level and knowledge of the techniques suited to the fifth grade. In practice, success in courses of this type depends largely upon the interest and skill of the individual teacher. Previous experience with children of different age levels is often helpful.

Six New England teachers colleges have removed methods courses from the geography department and placed them as special courses in the education department. These courses, called "Curriculum Materials and Techniques of Teaching," are organized by the director of the training

school in coöperation with subject matter specialists. The aim is a closer integration of work in various subjects and the elimination of much duplication in the teaching of techniques. The successful development of this idea calls for the coöperation and confidence of the various faculty groups.

Conclusions as to the Status of Geography in New England Teacher-Training Institutions

(1) Every school included in this study requires at least one course in geography for prospective elementary school teachers.

(2) Geography courses are frequently placed in the Social Studies or Social Science departments. This does not mean that integration of subjects has taken place, but simply serves as a convenient means of grouping subjects.

(3) Today, New England institutions, in general, fix the course requirements rather definitely; more required courses are listed than elective courses. Whereas, in 1933, Dr. Cunningham found the opposite was true for the country as a whole.

(4) In New England schools, content courses are more numerous than methods courses in both elective and required listings.

(5) Outstanding individual courses required by the largest number of schools are the Principles of Human Geography and Economic Geography. In this respect New England at present agrees with the situation in the country at large.

(6) Regional courses as a group are dominant and usually they are straight content courses.

(7) Methods courses as a group are second in importance to regional courses. Many so-called methods courses incorporate large amounts of subject matter.

(8) A recent trend in presenting techniques of geography teaching is found in the course, "Curriculum Materials and Techniques of Teaching," offered in the education department. Through the coöperation of the various subject matter specialists with the education department, this course presents techniques for all subjects.

(9) There is no hard and fast line between content and methods courses. Content courses often include suggestions as to the techniques of teaching geography, and in many instances methods courses contain a substantial proportion of subject matter. In this respect the teacher-training institutions of New England are similar to those of the country as a whole.

Table I.—Content Courses in Geography.

COURSES*	Number of schools offering each course	Number of schools requiring each course	Number of schools where course is somewhat professionalized
Principles of Human Geography	20	20	2
Economic Geography (Commercial and Industrial)	16	9	3
Regional Geography (Selected type studies)	6	6	
Continental Geography	8	4	2
Geography of North America	7	3	1
Geography of Europe	5	3	1
Geography of Asia	6		1
Geography of South America	1		
Geography of the Home State	2	2	
Political Geography (World Problems and International Relations)	4	1	
Physiography	3	1	
Geographic Backgrounds in American History	2		
Weather and Climatology	3		
Anthropogeography	1		
Natural Resources of United States	2		

* Titles for courses follow in general those of Dr. Floyd F. Cunningham in his study "The Present Status of Geography in Teacher-Training Institutions" in the Thirty-Second Yearbook of the National Society for the Study of Education, 1933, p. 548.

Table II.—Method Courses in Geography.

COURSES	Number of schools offering each course	Number of schools requiring each course	Number of schools where course is somewhat professionalized
Methods in Geography (General)	6	4	
Lower-Grade Methods in Geography	5	3	2
Upper-Grade Methods in Geography	4	3	3
Junior High School Methods in Geography	3	3	2
Senior High School Methods in Geography	2		

PROBLEMS IN TRAINING FOR GEOGRAPHY TEACHING

WILLIAM J. BERRY
STATE TEACHERS COLLEGE
KALAMAZOO, MICHIGAN

A VERY large proportion, if indeed not the majority, of students attending college geography classes are considering the prospects of teaching geography. Geography is a major subject in practically every elementary school and in a large and increasing number of high schools. Effective teaching of geography is contingent upon the efficient training of instructors to teach it.

Problems of Preparing for Elementary Grade Teaching

A most difficult problem in training for geography teaching is to determine what work should be recommended to students who plan to teach in the elementary grades, but do not wish to specialize in geography. If geography were the only important subject, or if elementary school work was generally departmentalized, each prospective teacher of geography should take the college courses that are required to become a specialist in geography. In most schools each teacher in the grades teaches several subjects, in many instances all the subjects that the children of a particular grade study.

To prepare for this work, prospective elementary teachers enroll in curricula designed to qualify for the teaching of many subjects. Ordinarily such curricula includes participation in courses in Geography, History, Mathematics, English, Biology, Hygiene, and other subjects. The students are also required to take several professional courses. There may be a requirement of a major and a minor of subjects taught in the grades.

Because of the necessity of participating in many fields, students can take only a few courses in any subject other than in the field of their specialization. Aside from those majoring and minoring in geography, students as a rule have time for only three or four courses in geography.

An outstanding problem, indeed if not *the* outstanding problem in teacher-training in geography is: how may we as college teachers plan and teach our courses so as to prepare to best advantage the non-specializing student to teach geography in the elementary grades? Obviously, there is not time enough in the twelve to fifteen credit hours, or thereabouts, during which they are enrolled in our classes, for non-specializing students to become well grounded in the philosophy and subject matter of geography and to receive training in the presentation of the subject to pupils. The problem is intensified by a dearth of geographic instruction of most students in their high school experience. The time is short in which to prepare to teach a subject that embodies a definite philosophy and a vast and intricate subject matter, contributing to the understanding of affairs of local, of national, and of international significance.

Notwithstanding an inadequate preparation, these non-specializing

students will teach geography to great numbers of pupils who will like or dislike the subject according to the effectiveness and accuracy with which the teachers handle their geography work. Therefore, as teacher-trainers, it becomes our duty and opportunity to plan and teach, with greatest care and interest, the three or four geography courses which these non-specializing students will pursue.

There may not be complete agreement among college teachers of geography as to what these courses should encompass. Most geographers believe, however, that a definite understanding of the larger geographic regions is essential, particularly the region in which the local community is situated, and of those other regions with which the people of the local community have their principal contact. In the first place, it is desirable that students know the important facts about each region: approximately the density of population, the quantity and character of its major products, the contributions it can make to the other regions, and the shortages in its production which are relieved through trade. In the second place, geography students should understand why the region makes its contributions and why it depends on other regions for certain materials. Obviously, the explanation for any particular human complex is found largely in the analysis of the natural environment: relative location, climate, topography, soils, and other natural factors.

It is believed that regional studies cannot be carried on satisfactorily until students have acquired a considerable geographic vocabulary and certain fundamental understandings that have universal application. These may be, and usually are, acquired in courses dealing with human relationships to the climate, topography, soil, and plant life. Upon completion of such courses, students will have acquired, in addition to generalized concepts of human-to-natural relationships, an understanding of world patterns of the various natural factors, such as the types of world climate, the distribution of major land forms, and the major soil groups. In some colleges, this introductory work is accomplished in one five-term-hour course. In others, it covers two courses. In a few, the introductory work continues throughout the year.

Practices differ as to regional courses that follow. In many colleges, the Geography of the United States and Canada, or the Geography of North America, is elected as a first regional course, and the Geography of Europe as a second.

Choice of Work for Students Specializing in Geography

The problem of courses to be elected by students who are majoring in geography has received much attention, and college and university departments have, for the most part, solved it to their own satisfaction. In general, specializing students are advised to take a year (six semester or ten to twelve term-hours) of introductory work including geographic philosophy, development of vocabulary, understanding of geographic relationships, and world patterns of both natural and cultural items. This is followed by regional courses designed to develop an intimate acquaintance with the major geographic regions. Such courses are designated Anglo-America, Middle America, South America,

Europe, Asia, Africa, Australasia, or by other titles indicating regional studies of the continents or parts of continents. In addition, students select other courses including Climatology, Geomorphology, Commercial Geography, Political Geography, courses in Historical Geography, courses designed to promote independent study in the field, and also the professional course, Teaching of Geography. Specializing students usually elect courses with credits totalling between forty and sixty term-hours.

Problem of Content in Introductory Courses

The preceding topics set forth, in brief, the work which might well be taken by students who specialize in geography, and also by those who do not. Unfortunately, it is not possible always to find out at the beginning of his first term in college whether the student will specialize in geography. It is safe to say that most students change their minds relative to the field of specialization after they matriculate, and many students have little or no plan for specialization at the outset. Some students decide on their major during their junior year, and some even in their senior year.

If we were sure a given group of freshman were to specialize in geography, we would advise courses in fundamentals and vocabulary and then other courses in sequence to attain mastery in geographic knowledge and skill. If we were sure that students would not become specialists, we would present the regions of the world with the intention of making the most of the situation by starting the students along the right geographic tracks in their grade teaching. Since we have, in the beginning classes, students who will specialize in geography and those who will not specialize in the subject, we cannot plan solely for one group or the other, but must plan the best work for both groups.

No final solution of this problem is known to the writer. It seems best not to attempt to segregate prospective majors and non-majors in their early courses, because that might discourage many who later would otherwise become capable geographers. It seems best to limit the pre-regional work to one or two courses and to devote little attention in them to geographic philosophy. If these students in their beginning courses understand that geography deals chiefly with description of human occupance and use of land and the explanations for the human developments described, this plan would seem sufficient.

Problem of Uncertainty in Placement

There is still another problem for which no adequate remedy is known. Students planning to teach rarely are certain as to the level in which they will eventually be employed. Most of them, at the outset, have not decided which work they prefer. They cannot be sure as to the abundance of teaching positions, and the resultant prospect of obtaining work of their preference. Even in states, such as Michigan, in which there are separate elementary school and secondary school certificates, students preparing for elementary teaching and also those preparing for senior high-school work may find employment in junior high schools. Obviously, there is enough difference between these three levels in subject matter and method of pre-

sentation to warrant different preparation for teaching. This problem is, of course, not peculiar to geography.

Recent Trends Toward Solutions

Probably no factor can be more effective in solving the problems set forth above than expansion of geography in the senior high schools. It seems to the writer that there have been noteworthy advances made in recent years along this line, but much remains to be done. It is indeed logical that there should be such extension, because geography deals with significant phases of human life: relations of people to their physical world, and of groups of people to other groups, lands, and countries. But there has been a reluctance on the part of some universities to accept high school geography credits on a par with other high school subject credits. The attitude of universities in this matter has restrained many high schools from expanding their offering in geography. With more geography taught in the secondary schools, the teacher-training institutions would not need to spend so much time in elementary work that is necessarily basic to real college geography.

A second trend seems to be towards less extensive work of a preliminary nature. The result, of course, is less adequate preparation for the regional work, but a more extensive coverage for studnets who subsequently take only a course or two in geography. It seems to the writer that all geographers should unite in their efforts to stimulate the trend toward expansion of geography in senior high schools.

GEOGRAPHY IN BIBLE STUDY

E. Ray Casto
EMORY AND HENRY COLLEGE
EMORY, VIRGINIA

THERE are two forms of geographic study that enrich Bible reading: physical and historical. Physical geography presents the background and the setting of events, and historical geography interprets the sequence of events.

Geography and history hold an intimate relationship. So vital is their connection that for best results the study of the one must be interwoven with the study of the other. The physical geography and the historical geography of the Bible reveal the hills and plains, the rivers and lakes, as the scenes of events of olden times which are stirring and far-reaching in their influence. A knowledge of the physical geography of Bible lands is essential for the correct interpretation of the historical events of Bible times.

The Bible reader who does not neglect the study of its geographic background gains in a realization of the forcefulness and beauty of the Bible. Bible geography should be limited not only to the theological school or to an adult Bible class; it offers untold satisfaction and delight to laymen, young and old. Study of the Bible and of Bible lands should proceed hand in hand.

The history of the Holy Land, or the Land of Israel, sets forth the high aim and purpose for all mankind. In

Palestine, Jesus exemplified man's mission on earth.

Geography of Palestine

Palestine has always been a small country, seldom interfering in affairs outside of its own boundaries. But from Palestine have issued moral forces that have influenced the high character and history of the civilized world.

In ancient times, Palestine stood apart from other lands, isolated from the great centers of world activity by deserts and by seas. To the ancient people, the sea seemed a great barrier which God had established to keep diverse peoples apart. Today the sea serves as a great highway of trade and communication between peoples in widely separated lands.

The Mediterranean coast of Palestine emphasized this idea, forming an inhospitable shore without a natural harbor. So little did the early Hebrews know of the sea that their language contains no word for "harbor."

The increase of early civilization depended largely upon the direction and character of the highways leading to the outside world. Palestine, seemingly isolated, stands on the great land highway that connects the centers of ancient civilization and power. Over these highways, patriarchs, prophets, Jesus, the apostles, and later missionaries ventured forth to the peaceful conquest of the world.

The contribution of Palestine becomes even more impressive with a realization of the relative dimensions and area of the land of Palestine. Its area is about 9,000 square miles, or the area of the state of New Hampshire.

As one reads of the Bible journeys from Dan to Beersheba, the full north-south extent of Palestine, he may obtain the impression of a great distance, but an examination of the map of Palestine and the application of the scale of miles, shows the distance to be about 140 miles, or less than the north-south length of New Hampshire. The distance across Palestine from Joppa on the Mediterranean coast to Jericho on the Jordan River is less than fifty miles, the distance between Portsmouth and Concord, New Hampshire.

Frequent use of a Bible Atlas, or of maps sometimes found in the appendix of the Bible, enables the reader of the Bible to think of Palestine as a reality, with its plains and mountains, its rivers and lakes, its cities and villages, its people going about their daily work as elsewhere in the world,—a small territory whose religious influence has become world-wide.

The Jordan Valley

The importance of the Jordan River and the Jordan Valley to the inhabitants of Palestine, both in Bible times and at present, is better understood if the reader visualizes the river as flowing not across a broad, level plain, but in a deep, narrow rift valley. Throughout the length of Palestine, the valley of the Jordan is below sea level. The Sea of Galilee is 682 feet below, and the Dead Sea, 1,292 feet below the level of the Mediterranean Sea. This depression of the Jordan Valley below sea level produces climatic conditions approaching tropical temperatures, while the uplands in the vicinity of Jerusalem, only a few miles away, experience a

temperate climate, with occasional snowfall.

Homes of Palestine

Knowing something about the homes of Palestine helps to clarify many references in the Bible to houses and to family life.

The Western World, reading Luke's account of the birth of Jesus, "laid him in a manger because there was no room for them in the inn" (Luke 2: 7), has, in terms of its type of modern, domestic architecture, conceived of the birth as taking place in a stable or barn, a building apart from the dwelling and used solely for animals.

A study of the structure of the buildings of Bethlehem and the habits of the people of the East reveals the true relationship of guests and host and shows there was no lack of hospitality on the part of the innkeeper on the night of the birth of Jesus.

The humble houses and the inns of Bethlehem are built on the same general plans. The family and the domestic animals are sheltered under the same roof with only a slight separation of apartments.

The living quarters of the family are on a sort of balcony, while the animal quarters are below, near the door. The feed for the animals is placed in a flat trough or manger. Sometimes the manger is made of clay mixed with straw, sometimes of small stones cemented with clay, and sometimes it is a recess cut into the wall.

If the house in which Joseph and Mary sought and gained refuge had a "guest chamber," often an upper room on the roof of the house, apparently it was already occupied. There was no room in which to lodge the Holy Family except on the lower floor of the house, hence the newborn babe was laid in a manger.

Customs of the Times

In Bible times, people did not wear foot covering in the house. Out-of-doors, sandals were worn. Sandals provided so little protection from the dust and sand that the feet were more or less soiled or irritated after even a short journey. Therefore, the offering of basin, water, and towel was the first courtesy extended to a guest. The story of Abraham's entertainment of the three strangers (Genesis 18: 1-5), the rebuke of a rude host by Jesus (Luke 7: 26-47), and the Master's washing of the feet of the disciples (John 13: 1-7) are illumined for the reader who understands the customs of Bible days.

The shepherd of Palestine does not drive his sheep. They follow him. The sheep know his voice. They will not heed the voice of a stranger. When one has seen or read of the relationship of shepherd and sheep in Palestine, the sayings of Jesus in John (10: 3-4) are far more meaningful. "The sheep hear his voice and he calleth his own sheep by name." He goeth before them, and the sheep follow him: for they know his voice."

The sheepfold is circular within a wall of stone or mud-brick. There is an opening in the wall large enough for the sheep to pass through. There is no gate or door to close this opening. At night, the shepherd lies in the doorway and neither man nor beast may go in or out without his knowledge. No harm can come to

his flock except over the shepherd's body. A portion of John (10: 7-15) refers to this watchfulness of the shepherd. In many cases two or more flocks will share the same fold and their shepherds may take turns guarding the flocks or visit together as they did on the night of the birth of Jesus (Luke 2: 8). In the morning there is no confusion when the shepherds and their respective flocks start out to pasture, because each shepherd calls his sheep by name and they know his voice and follow him (John 10: 1-15).

The following lines give the picture of a sheepfold as seen by one observer:

A traveler once, when skies were rose and gold
With Syrian sunset, paused beside the fold
Where an Arabian shepherd housed his flock;
Only a circling wall of rough grey rock—
No door, no gate, but just an opening wide
Enough for snowy huddling sheep to come inside,
"So," questioned he, "then no wild beasts you dread?"
"Ah yes, the wolf is near," the shepherd said,
"But—" strange and sweet the words divine of yore
Fell on the startled ear; "I am the door!
When skies are sown with stars, and I may trace
The velvet shadows in this narrow space,
I lay me down. No (wandering) sheep may go
Without the fold, but I, the shepherd, know.
Nor need my cherished flock, close-sheltered warm
Fear ravening wolf, save o'er my prostrate form."
O word of Christ illumined evermore,
For us his timid sheep—"I am the door."

The Twenty-third Psalm is a beautiful story of the relationship between the shepherd and the sheep as well as a tribute to David's confidence in God's grace.

Rise, Take Up Thy Bed and Walk

Many people of the western world have wondered at the command to the man healed of palsy when Jesus said, "Arise take up thy bed, and go unto thine house" (Matt. 9: 6), and to the man healed at the pool of Bethesda to whom Jesus said, "Rise, take up thy bed and walk." The types of beds used today in America and in Europe would make this seem impossible. One man could not well handle the heavy beds usually found in the western world. The bed of which Jesus spoke was made by laying down a mat woven of rushes and often covering it with the skins of sheep or goats. A more common bed consisted of a light quilted mattress which might be rolled and easily carried under the arm. This is the type which the summer visitor to Palestine may see any morning if he awakens early enough to see the natives arise from beds on their roofs, take the beds under their arms and carry them down the outside stairway to store them in the living room of the house.

The Bible is rich in journey geography. It is in large part a book of travels. Children especially have a deep interest in the journeys of the men of Bible times. The student of Bible journeys will find these narratives the experiences of no casual tourists, but of men who spent their entire lives in these lands. The student of Bible journeys will profit by having maps available and tracing the journeys, thus making them more real. To know the lives of the great

men and women of the Bible we must know the geography of the land in which they lived.

Students of Bible geography find that the Holy Land and its way of life remain remarkably unchanged. The customs, the costumes, the habits of speech, and the manners of the people have been so little modified that the pilgrim in Palestine may, if he wishes, envision the old life over again. No other area of the world is a more perfect epitome of the history of the ages. God planned that His Son should not be wholly foreign to any people.

A PLAN FOR THE INDUCTION OF STUDENT TEACHERS INTO THE TRAINING SCHOOL GUIDANCE PROGRAM

ROYAL B. EMBREE, JR.
CLAUDE EGGERTSEN

Mr. Embree was Director of Guidance at the University of Minnesota High School from 1935 to 1938. From then to the present time he has been Instructor and Research Counselor at the University of Minnesota General College. Our readers will recall the article on "Participation in Guidance for Student Teachers" by these two authors that appeared in June, 1939, number of EDUCATION.

Dr. Eggertsen from 1935 to 1939 was instructor in Social Studies at the University of Minnesota High School, serving as Director of Curriculum during the year 1938-1939. He is now Instructor in Education at the College of Education, University of Michigan.—EDITOR.

IN another article, the writers have pointed out the need for student teachers to become actual participants in the guidance work of the training school.[1] The argument was advanced that such institutions must offer supervised experience in guidance just as they do in instruction. A number of pertinent suggestions, rather general in nature, were offered.

This second article will describe a plan, already in operation, whereby student teachers are brought into direct participation with the guidance work of a university training school. Like most educational procedures, the plan did not spring fully formed into operation, but was evolved after several years of trial and expansion. It began with Eggertsen's demand for the training of student teachers in pupil analysis.[2] Its subsequent development involved a progressive broadening and redirection of emphasis in connection with the original suggestion.

Training Student Teachers in Pupil Analysis

In the spring of 1936, the social studies department of University High School, University of Minnesota, asked the coöperation of the school's guidance department in working out an organized program for training student teachers in pupil analysis. A comprehensive mimeographed manual covering practices in this area had already been distributed to these student teachers.[3] The high school guid-

1 Embree, Royal B., Jr., and Eggertsen, Claude, "Participation in Guidance for Student Teachers," "Education," June, 1939.

2 Eggertsen, Claude, "Pupil Analysis in Student Teaching," "Educational Administration and Supervision," 23: 263-279, April, 1937.

3 Eggertsen, Claude, "Student Teaching in the Social Studies," University High School, University of Minnesota, Minneapolis.

ance director spoke to the entire group, dealing chiefly with the school's guidance objectives and with techniques of measurement and record-keeping. The cumulative record system was explained in detail. During the following weeks, all student teachers in this department came to the counselling office in groups of three or four, securing further individual instruction with regard to the record system and other problems of guidance which interested them. The various supervisors, in coöperation with guidance officials, suggested the taking of notes on pupils with whom student teachers were dealing. In some cases, brief notes on many pupils were suggested, while in others, more comprehensive case studies of a few were preferred. Every student teacher in the social studies department participated in this work, conferred with a supervisor about these guidance experiences, and used the data obtained in connection with classroom teaching.

It was rather generally agreed by both student and critic teachers that the experience had been interesting and valuable. During the session 1936-1937, the plan was expanded at the request of supervisors in other departments. There was no marked change in procedure. The program continued to involve talks by the guidance director, office conferences, and supervised study of cumulative records. However, approximately three-fourths of the departments which operated in the high school building participated in the work.

Every Department Cooperating

The plan, on the basis described above, reached its maximal development during the session 1937-1938, with every department in the high school building coöperating. The ready response of supervisors and student teachers, coupled with their expressed satisfaction, furnished evidence that the program represented a step in the right direction. However, in two years, there had been no basic change in procedure other than that represented by the steady increase in the number of participants. Except for those student teachers who pushed further into guidance work on their own account, the plan continued to involve talks by the guidance director, conferences, work with cumulative records, and wide use of data in student teaching activities. There was unquestioned value to this work. Supervisors were coöperating well, and many student teachers were evolving their own abbreviated cumulative records for all pupils with whom they came in contact. Practice in this regard was helpful to an understanding of certain guidance techniques and very valuable preparation for work as home-room teachers.

Major Drawbacks

Despite apparent effectiveness, however, several major drawbacks to the organization described above had become obvious. In the first place, it carried with it little or no realization on the part of student teachers of an actual participation in the guidance work of the school. In the second place, the activity had come to absorb too much of the service time of guidance officials. Student teachers' use of the cumulative record system was making severe inroads upon its availability for work with pupils. Furthermore, the advisability of offering all personal data in record folders to student teachers was questioned by responsible individuals interested in

the work. With all these problems in mind, a reorganization of the plan was effected and the method of procedure described below put into full operation in the autumn of 1938.

The Minnesota Plan for Student Teacher Participation in Guidance

The keynote of the plan as it is now organized is the actual participation of student teachers in the various features of guidance work. They do not merely study and observe techniques, but they become a part of the system, making definite contributions to it, very much as they do in the instructional aspects of their work. These student teachers are learning guidance by being part of it in a practical school situation. This attempt to provide real participation in guidance distinguishes the present program from previous efforts described in foregoing paragraphs.

Certain of the devices and techniques evolved during this three-year attempt to meet the need for practical guidance experience appear worthy of description. Although it is axiomatic that any program such as this must be built around the peculiar needs, opportunities and limitations of individual institutions, certain practices may bear general application and others will at least provide suggestions. With this in view, a few of the more important features of the Minnesota plan will be described.

The Minnesota Plan

A first step toward the expanded program was the appointment of one member of the guidance staff whose chief responsibility was to work with student teachers. It is necessary that such an individual be well grounded in both the technical aspects of guidance and the actual problems of counselling, and that he be assigned few, if any, duties beyond those concerned with the participation of student teachers in guidance. Either the director or the associate described here may lead group discussions, but one person must be readily available at all times for conferences with student teachers.

Some of the problems arising from the use of the central cumulative record system have already been mentioned. These difficulties were obviated by the preparation of a secondary record system, designed for student teachers and used only by them. These files are kept in the office of the guidance official who supervises the work, and the room has been equipped with tables at which student teachers may study and abstract cumulative records. This secondary record system is like the regular file except that it is less inclusive. Files are kept upright in manila folders. The principal feature is the cumulative record card designed for use at University High School and described in an article by one of the writers.[4] Pupil questionnaires are contained in both records, but the student teacher system contains only these and the record cards at the beginning.

The system is to be maintained by the contributions of student teachers and the fact that it is theirs is stressed in every group and individual contact. They are encouraged to use records freely, to seek help from the worker in charge whenever they need it, and to prepare notes regarding their contacts with pupils for inclusion in the files. Many of these notes can well be copied and included in the primary

[4] Embree, Royal B., Jr., "A Cumulative Record System Based on Permanent Standard Scores for Intelligence Quotient and Achievement," "School Review," 45: 438-446, June, 1937.

records, for student teachers will often make valuable contributions towards the better understanding of pupils. Opportunity is given for discussion of the writing and filing of case notes with guidance workers and supervisors. Throughout, student teachers are made to feel that they are building and using their own cumulative record system.

Close coördination between the guidance department and supervisors is maintained. Group discussions and individual conferences must be arranged in advance, and the guidance work of student teachers — interviewing, incidental counselling, diagnosis, remedial instruction, and the like — must be supervised. Student teachers in any setting are continually playing some part in such guidance activities, but the University High School program integrates these efforts, makes for a more critical and careful approach, and preserves the results of this work.

It is obvious that the program depends to a considerable extent upon the possession of an adequate guidance viewpoint by supervisors. This, unfortunately, cannot be assumed in all cases. However, one strong feature of the scheme lies in the fact that supervisors who do not possess such a viewpoint are forced toward its consideration. At University High School, the participation plan is administered by a committee composed of guidance officials, the principal, and the various department heads of the teaching staff. Such an arrangement improves coördination by building common understanding.

Principal Results

The principal results forthcoming from this actual participation in guidance may be itemized as follows:

(1) Acquisition of a guidance viewpoint. Concepts taught in college classes are clinched by actual experience in a practical situation.

(2) Understanding of the technical aspects of measurement and record-keeping. Many points are clarified by actual contact with the records under the supervision of trained workers.

(3) Practice in pupil analysis.

(4) Actual experience in building and using a personnel record system. It is to be hoped that student teachers who have had this experience will not be content without cumulative records in subsequent school work.

(5) More care in interviewing, diagnosis, and remedial work. This should result from the realization that such work will be reported and placed in the records for the assistance of others who are working with the pupils.

Suggested Improvements

Several improvements might be made in the plan as it now exists at University High School. Coördination between the college offering in guidance and the program of participation in the high school could be improved. The most likely procedure would be to have both programs headed by the same individual. When this is not done, the task of drawing the two together is bound to be somewhat difficult. There is little doubt that both the teaching of guidance and experience in its application would be improved by the common direction of the two aspects of training.

On the mechanical side, there is need for the preparation of pupil questionnaires and student teacher report forms which can be filled out in duplicate. The former must go into

both systems, and the latter often should be included in primary record folders. It seems possible that identical forms, separated by a perforated division line and used with carbon paper, might resolve this problem, but the device has not yet been tried.

There is definite need for an increasing apportionment of time to this participation in guidance work. Some hours formerly given to class observation are now devoted to the new program at University High School. However, the amount of time should be increased, and student teachers should be led to feel that guidance experience is as essential to future success as is practice in instruction.

Conclusion

In conclusion, it appears wise to warn against the confusion of this program with plans for the provision of clinical experience to students who are specializing in guidance work. An excellent offering of the latter type is made in conjunction with the University Testing Bureau, University of Minnesota. The University High School participation program is not designed to furnish clinical experience to people who are planning to be experts in the guidance field, although it could supply valuable supplementary training in many cases. The plan described in this article rests upon the assumption that adequate guidance involves the integrated and interested activity of an entire staff, and it is designed to prepare student teachers for their important responsibilities in such guidance situations. It is hoped that teachers with this training will press for more adequate guidance service in the schools with which they become associated.

REVIEWS OF RECENT RECORDINGS

WILLIAM P. SEARS, JR.
NEW YORK UNIVERSITY

Symphony No. 9 in C Major. Schubert. RCA-Victor, Camden, N. J. Musical Masterpieces Set M-602; $9.00.

Franz Schubert (1797-1828) was one of the most talented of all the composers of the classical period. Despite the limitations in his musical training, his original genius was such that he surmounted brilliantly the problems which confronted him in the field of composition. The "great" *C Major Symphony* is generally regarded as Schubert's greatest composition. Robert Schumann obtained the manuscript of this symphony from among a mass of material left by Schubert to his brother Ferdinand. Felix Mendelssohn became interested in the work and did much to bring this great and melodic symphony to the attention of audiences throughout Europe. The present recording was made by the London Symphony Orchestra under the direction of Bruno Walter. Like all of the compositions of Schubert's last years, the *C Major Symphony* bears all the traces of the genius of its author. The recording is tonally perfect and the album is one that deserves a place in every school and college library.

Concerto for Violin and Orchestra. Bloch. Columbia Recording Corporation, Bridgeport, Conn. Columbia Masterworks, M-380. $6.00.

The eminent music critic Ernest Newman once declared that Ernest Bloch (1880-) is "one of the two or three composers of the present day who really matter."

Bloch was born in Switzerland, at Geneva, in 1880. At the age of eleven he decided to become a composer. He studied violin when he was a child and later one of his teachers was the renowned Ysaye. It was during young Bloch's early years that his father's clock business required the future composer's time, and for a time the lad had to give up his musical aspirations and become a traveling salesman of cuckoo clocks in Germany.

Within a few years, however, Bloch returned to his musical career and became a professor of composition and a lecturer on aesthetics at the Geneva Conservatoire. After conducting concerts for some time in Switzerland, Bloch set sail for America in 1916 as conductor for the dancer Maud Allen. Bloch's American career, however, really began when he accepted a position as teacher in the David Mannes Music School. In 1920 Bloch became director of the Cleveland Institute of Music, and after four years he moved to California to conduct the San Francisco Conservatory. In 1930 a patron of art provided a fund with an income that would enable Bloch to devote his entire time, for a ten-year period, to creative work.

Bloch's *Violin Concerto* was first performed in Cleveland by Joseph Szigeti and the Cleveland Symphony Orchestra, conducted by Dimitri Mitropoulos on December 15, 1938. The work, in the traditional three movements, is a dramatic piece characterized by dazzling sonorities and brilliant contrasts. This Columbia recording of the Bloch *Concerto* has been made by Joseph Szigeti and the *Orchestre de la Societa des Concerts du Conservatoire* (Paris), conducted by Charles Munch. It is a first recording of the work and a magnificent example of modern music at its best. Ernest Bloch, himself, was tremendously impressed with this splendid recording of one of his major works.

George Gershwin Music. Decca Album No. 31. $5.50.

Concerto in F. By George Gershwin. Decca Album No. 57. $2.50. New York. The Decca Co., 50 West 57th St.

George Gershwin (1898-1937) has taken

his place as one of the great figures in the world of modern music. It was the firm belief of this brilliant creative artist that in the "jazz" idiom lay the germ of a new and exciting American music, music that would transcent the limitations of the popular song and dance form while still retaining the freshness and the sophistication of Tin Pan Alley. During his short and meteoric career, Gershwin proved his thesis and from his fertile pen came composition after composition that demonstrated the composer's deft genius for composition as well as his unique and fresh approach to his craft. From the very beginning Paul Whiteman saw eye to eye with Gershwin. It was on a historic day, February 12, 1924, that Gershwin was really launched on his musical career. On that day Paul Whiteman conducted the now-famous *A Rhapsody in Blue* for the first time. Old Aeolian Hall in New York was the scene of this auspicious event. It is small wonder that when the Decca Company got around to recording some of the major Gershwin items that Paul Whiteman and his orchestra were called in to assist in what must truly have been a labor of love. Two albums are now available in the Decca catalog and both are valuable in that they give a complete picture of Gershwin the great composer of modern American music. Volume 31 contains the recordings of the *Rhapsody in Blue*, the *Second Rhapsody*, the *Cuban Overture*, and *An American in Paris*. Volume 57 is devoted to a recording of the *Concerto in F* for piano and orchestra. Both albums are competently recorded and the Whiteman orchestra interprets the tuneful Gershwin music with a refreshing zest. These albums will assist in the motivation of many classes in the study of modern times and modern music.

Symphony No. 41, in C Major ("Jupiter"), *Mozart*. RCA-Victor, Camden, New Jersey. Album M-584. $5.75.

Wolfgang Amadeus Mozart (1756-1791) was one of the greatest geniuses of all time. Throughout his short and very unhappy life Mozart startled the world by his extraordinary powers both as a virtuoso and as a composer. The "Jupiter" Symphony represents one of the greatest feats in the entire history of music. It was written, together with two other marvelous works of the same *genre*, within a period of six weeks, between June 26 and August 10, 1788. How or why the work received the title "Jupiter" has never been clearly explained. With his wife gravely ill, and with no source of income, with creditors at his very door, Mozart was driven nigh unto desperation and utilizing every ounce of his physical and mental powers he set to work to compose some symphonies. The result was the "Jupiter" as well as two other magnificent works. The "Jupiter" is undoubtedly the greatest of all the Mozart symphonies. It was also his last venture in this form. The present Victor recording was made by the Vienna Philharmonic Orchestra conducted by Bruno Walter. The album is one that "must" be in any library of recorded music. It is Mozart at his best recorded by an orchestra that is deep in the Mozartean tradition under a conductor who deeply appreciates the genius of this unfortunate composer.

SINGLE DISCS

Hector Berlioz (1803-1869) wrote only one oratorio, "The Childhood of Christ." This work, in three parts, deals with the trials of the Holy Family. It was first produced in 1854. Columbia has recorded the section *Adieu des Bergers* (Columbia 69693-D; $1.50) which is arranged for mixed choir and orchestra. Coupled on this disc is the motet *Ave Vera Virginitas* by Josquin des Pres (1445-1521). Des Pres has often been termed "the father of modern harmony." Both selections have been recorded by the Strasbourg Cathedral Choir of 120 voices.

Giuseppe Verdi (1813-1901) is one of the greatest figures in the story of nineteenth century opera. The setting for his opera *Simone Boccanegra* is The Venice of the Doges. The recitative *Plebe, Patrisi* and the arias *Figlia, Tal Nome Palpita* and *Piangi Su Voi* has been recently recorded for Victor by Lawrence Tibbett, Giovanni Martinelli, Rose Bampton and the Metropolitan Opera Chorus and Orchestra (Victor 15642; $2.00).

George Gershwin's setting of *Porgy and Bess*, from the play of Dorothy and Du Bose Heyward, has become an American institution. The marvelous Gershwin tunes are justly beloved by countless thousands of Americans. Paul Robeson, the great Negro bass, sings excerpts from *Porgy and Bess* on the Victor set No. 26358 and 26359 (75 cents each). The selections included on these two discs are: *It Ain't Necessarily So* and *A Woman Is a Sometime Thing* (disc No. 26358) and *Summertime and the Livin' Is Easy* and *It Takes a Long Pull to Get There* (disc No. 26359).

La Boutique Fantasque is one of the most delightful of the modern ballets. The sparkling melodies of Rossini have been woven together by the late Ottorino Respighi to provide the musical score for this bright and gay ballet. The action is set in a toy shop of about 1860. Customers enter the shop and are delighted by the dolls on display. Purchases are made and, unfortunately, two cabaret dancers are sold to different customers. Of course at night the dolls come to life and all plot to save these cabaret dancers from the cruel fate that awaits them. The next day the customers return, irate at the failure of the shop to deliver its orders. When the customers begin to wreck the shop, the dolls come to life again and drive the customers into the street. The vivacious rhythms of Rossini are recorded on Columbia 69212 ($1.50). On this disc Walter Goehr conducts the London Philharmonic Orchestra in selections from this ballet.

DEPARTMENT OF BOOK REVIEWS

Industrial Geography. By *Charles E. Landon.* Prentice-Hall, Inc., New York. 1939. 811 pages. $4.00.

Dr. Landon, who is an assistant professor of economics at Duke University, says in his general introduction to this all-inclusive volume: "The main purpose of this book is to bring into sharp relief the relationship existing between the major elements of the physical environment — location, climate, land forms, water bodies, and natural resources — and the development of industrial activities." The volume attempts to give the physical basis and the economic principles underlying territorial specialization and to focus attention on the significant aspects of the industrial activities of the different countries. Professor Landon divides his volume into two sections. The first, and the major one, deals with the United States. For this section the industrial-unit basis of treatment is employed. The second section deals with the remaining countries of the world. Here the basis for the author's discussion is the country unit. *Industrial Geography* is timely, up-to-date, complete, and extremely well organized. It should prove a helpful text for all those who study the resources of the world. Throughout, Professor Landon stresses the fact that although physical factors are basic and set limits to human activity, the degree of completeness with which man utilizes his physical environment depends upon cultural factors, which have themselves evolved out of the complex of physical factors.— WILLIAM P. SEARS, JR., New York University.

Physical Science in Modern Life. By *E. G. Richardson, B.A., Ph.D., D.Sc.* D. Van Nostrand Company, N. Y. 256 pages. $3.00. 1939.

This book was written by a learned English physicist. To read it one needs a thorough knowledge of physics and, near at hand, must be a dictionary that has many specially-used English words and expressions. Words rarely used by American scientists are common in this volume.

The first feature of this book to impress the reviewer was its emphases not upon the nature of matter but upon the motion of inanimate things. We are in-

clined to give much attention to the nature of Light, Heat, Electricity, etc., but comparatively less attention to the motion which is of the very essence of matter. An interesting sentence at the beginning of the first chapter seems to indicate the fundamental thought of the author in writing this book. He says, ". . . our constitution as human beings is such that our interest is quickened by the study of objects in movement." Then he adds, "A baby's eyes will follow an object in motion while they pass unseeing over stationary objects in his environment." Perhaps the amazing attractiveness of moving pictures, in our present day, is due largely to our innate love of action, movement, progress.

Though discussed with much erudition, such practical subjects as Streams and Eddies, Vibrations and Waves, Sound Waves, Supersound, Heat, Light, Electricity, Reaction and many others are presented. Though most appropriate for scholarly perusal, many of the paragraphs are understandable to the ordinary reader.

Of peculiar interest are the photographic illustrations. Many of the waves described are presented graphically, thus illuminating the discussions greatly. The unusual formations of these spatial waves are clearly set forth. It must have taken very high magnification and other very special methods to get these pictures of aeolian vortices, vortices in edge tones, water and sand ripples, circulations in sounding columns of air, diffraction of light, and variable densities in sound. But such reproduced photographs are presented in pleasing variety.

The book is one that any teacher of physics might use to great advantage.—EARLE AMOS BROOKS, Boston University School of Education.

Treasury of Words (Roget's). By *C. O. Sylvester Mawson* and *Katharine A. Whiting.* Thomas Y. Crowell Co., New York City. 444 pages. $1.00.

For one dollar this is an exceedingly valuable reference book. It is an abridged edition of "Roget's International Thesaurus" especially designed for the secondary school student. The editors weeded out all obsolete, rare and bookish terms to create a stream-lined guide to English as written and spoken today.

Like the original thesaurus, the words and phrases are grouped by *ideas*, an arrangement in itself of considerable importance to the education of students who take pride in the accuracy and charm of their language. The book has the standard thesaurus index; has chapters on the growth of English synonyms, word formation, prefixes, suffixes, roots, foreign words and phrases, and abbreviations.

The authors are Dr. C. O. Sylvester Mawson, whose experience in the preparation of dictionaries places him definitely in the class of experts, and Katharine Aldrich Whiting, teacher of English and literature from Boston.

Society in Transition. By *Harry Elmer Barnes.* Prentice-Hall, Inc., New York, N. Y. 969 pages. $3.75.

Society in Transition is an encyclopedic piece of work from the pen of Dr. Harry Elmer Barnes. Practically every major social problem which confronts modern society is treated in this most comprehensive volume. There is no mistaking Professor Barnes's point of view, and on page one he succinctly sets forth his theme: "The most striking characteristic of our twentieth-century civilization is the enormous discrepancy which exists between our scientific and mechanical achievements, on the one hand, and the social thinking and institutional structure, on the other, by means of which we attempt to control the new mechanical era." Through almost a thousand pages Dr. Barnes expands this thesis with particular reference to the perplexing problems of the present day. Many may choose to differ with Professor Barnes on his various interpretations and conclusions but all will agree that he presents them thoroughly, objectively, and comprehensively. The book, despite its size, is one that even a hardened reviewer will read page by page.—WILLIAM P. SEARS, Jr., New York University.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

The Everyday Bible. By *Charles M. Sheldon.* $1.00. Thomas Y. Crowell Co.

The Complete Desk Book. By *C. O. S. Mawson* and *John Robson.* $2.50. Thomas Y. Crowell Company.

Latin—Third Year. By *Louis E. Lord* and *Loura B. Woodruff.* $2.04. Silver, Burdett Company.

Safe and Healthy Living Series. By *J. Mace Andress, Ph.D., I. H. Goldberger,* and *Marguerite P. Dolchi.* Illustrated. Book I, Spick and Span, 64c; Book II, The Health Parade, 72c; Book III, Growing Big and Strong, 76c; Book IV, Safety Every Day, 76c; Book V, Doing Your Best for Health, 80c; Book VI, Building Good Health, 84c; Book VII, Helping the Body in Its Work, 84c; Book VIII, The Healthy Home and Community, 88c. Ginn and Company.

Our Virgin Islands. A History of the Virgin Islands for the Junior High School Grades. By *A. Thurston Child,* Superintendent of Education in St. Croix. Illustrated by *Aline Kean,* Supervisor of Art, St. Thomas. Published jointly by The Departments of Education, St. Thomas, Virgin Islands, and St. Croix, Virgin Islands.

Long, Long Ago. By *Marjorie Pratt* and *Mary Meighen.* Illustrated in color by *Carol Critchfield.* Benj. H. Sanborn & Company.

Everyman's Drama. A Study of the Non-commercial Theatre in the United States. By *Jean Carter* and *Jess Ogden.* $1.00. American Association for Adult Education.

Educating for Health. A Study of Programs for Adults. By *Frank Ernest Hill.* $1.25. American Association for Adult Education.

Europe the Great Trader. By *Alison E. Aitchison.* Illustrated. $1.04 list. The Bobbs-Merrill Company.

Visual Outline of Educational Psychology. By *Guy T. Buswell.* $.75. Longmans, Green & Company.

Gandhi Triumphant! The Inside Story of the Historic Fast. $1.00. Universal Publishing Co.

Music Appreciation for Children. By *Dr. Frances Elliott Clark.* Educational Department, R.C.A. Manufacturing Co., Inc.

Adult Adventures in Reading. By *Elizabeth C. Morriss.* With a Foreword by *Arthur I. Gates.* Illustrated. E. P. Dutton & Company, Inc.

The New Wizard of Oz. By *L. Frank Baum.* Illustrated by *W. W. Denslow.* The Bobbs-Merrill Company.

Modern Philosophies of Education. By *John S. Brubacher.* $3.00. McGraw-Hill Book Company.

El Licenciado Vidriera Visto por Azorín. Edited with introduction, exercises, notes and vocabulary by *Margarita de Mayo, M.A.* $1.00. Oxford University Press.

Scenes de la vie Francaise. By *Claire A. Roe* and *Frederick C. Roe.* Illustrated. 90c. Longmans, Green and Company.

Fashions Since Their Debut. By *Corrie Wilson,* Fashion Artist and Designer. International Textbook Company.

The Theory and Practice of Personal Counseling. By *Hugh M. Bell.* $1.25. Stanford University Press.

The Arithmetic of Business. New Edition. By *Frank J. McMackin, John A. Marsh* and *Charles E. Baten.* $1.48. Ginn and Company.